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ORIGINAL ARTICLES.

SENSATION, PHYSIOLOGICAL AND PATHOLOGICAL.*

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Man, God's most sublime marvel of understanding, is liberally endowed with inlets for stimuli to be conducted through the agency of molecular motion and vital force to his superior faculty of thinking. Impulses thus received stir up sensations which awaken our psychical operations. Perhaps a glance at their utility will exhibit the supreme importance of them. All of our acquaintance with the outside world, all of the accessible on a level with our capacities, all of the known this side of the end of human knowledge, rests upon sensation, physical, emotional (or may be latent, which when called into use goes by the name of reflex perception), for a basis. Its latitude is much broader than is usually supposed. To pass out of its circlet is to enter fairyland, a region of mists and shadows where even genius will grope her way in intellectual darkness striving to know the unknowable.

Between the alpha and omega of sensibility an ample compass is found for the broad range of thoughts' excursions. Imagination swings on its pivot and to be trustworthy must be consistent with its experiences—must point to the north, so to speak, the variation excepted. To go a step further, I believe as Condillac maintained, that the power of modifying conceptions itself is only a way of impressing the mind through the gateway of sensation. Certain it is that the organs bringing us in contact with the external world have much to do with the curious phenomena of the evolutions of the mental operations. Nerve currents, let us remember, play an important *rôle* in our psychic existence. Be it noted that sensations are not the property of corporeal systems, gentlemen, but are the mental responses of nervous action and belong to psychology. Without nerve fibers conveying impressions to and from the brain centers, this organ would be plunged deep into the arms of Morpheus with no functional existence. So, too, the in-carrying and out-carrying fibers, separate and apart from nerve cells, would be only neural strings without utility. It is by their mutual workings that man obtains this great functional activity of the most wonderful portion of his being—the nervous system. Like Chang and Eng, it is by their union that we always find them side by side.

Sensation dwells in the brain and depends upon it for existence. The end organs are merely instruments, for the eyes do not see, the ears do not hear, nor the fingers do not feel. Cut off the nerve fibers carrying messages from any organ to the brain and sensation of this organ is at an end thereafter. The histological construction and physiological action of the nerves conveying the impulses

*A paper read before the Northwestern Ohio Medical Association, December 13, 1894.

of sight, hearing, taste, touch and smell to the central nervous system do not differ in the smallest degree. The elements as elements are the same so far as now known. It is because the end organs of the optic, the auditory and the olfactory nerves differ that we have sight, hearing and smell respectively. Any centripetal nerve of special sense could as well carry in messages for any other sense organ as its own. Professor James has told us that "if we could splice the outer extremity of our optic nerves to our ears and that of our auditory nerves to our eyes, we should hear the lightning and see the thunder."

From the threshold or liminal intensity of excitation to that point beyond which additional stimulation fails to bring forth any noticeable augmentation in the mental impression, the effect hangs on the active power of that which arouses the vital energies and upon the degree of excitability. The ratio of the former to the latter varies with each sense organ. When the excitant is too intense the organ refuses to respond, but moderate use increases the acuteness of sensation. The mariner beholds a ship in the sensible horizon which is imperceptible to the landsman's sight. The microscopist and the astronomer learn to what extent one organ of sight will by practice surpass its fellow. It is instructive to civilization to know that the red man, by placing his ear to the earth's surface, can locate a moving herd of buffaloes miles distant or know the tread of a troop of cavalry. The accomplished musician has a capacity for receiving sounds and discriminating limits of pitch by far out of reach of the unskilled ear. He has a niceness of perception of harmonies and discords which is not found in the inexperienced artist. So the watchmaker acquires a nicety of touch of which the blacksmith forms no conception. And, too, the water-drinking Hindoo discovers a difference of savor in the waters of different springs which are alike insipid to the man who seldom drinks water. As a scientific study, the much-neglected sense of smell is receiving attention to-day, and D. McFarland Moore is of the opinion that in the near future the mind will be as much enchanted by a symposium of symphony in scents as by a symphony of sounds. Cut off smell and sight and the gustatory qualities will to a great extent go with them. After dining in a resplendent hall in the company of beautiful and accomplished ladies, in an atmosphere impregnated with fragrant odors, amid the harmony of soft and enchanting music, we are easily convinced that taste has been crowned and heightened by contributions from smell and sight. There is philosophy in compressing the alæ of the nose and closing the eyes when nauseating remedies are swallowed and in not doing so to obtain the deliciousness of delicacies.

Every individual educates and disciplines one organ of sense so that it becomes more perfect than the others. But, however, it is in those cases wherein a certain one has become permanently destroyed or never existed at all that we learn to how great a degree the others may be cultivated and improved so as to make good the deficiency. In fact, he who has a special sense shut is not the object of commiseration that he is usually held to be. Unaccountable feelings tell the blind that they are near a tree, high or low; in close proximity to a building, large or small; not far distant from a fence, open or solid; yea, a multitude of other things even more marvelous. The deaf, by giving careful attention to the movements of the lips and by observing numerous smaller motions of the features which are unnoticed by others, may be enabled to obtain a degree of knowledge, not of what is said, but of what the speaker means to say. The acuteness and accuracy of the sense of smell possessed by the oft-quoted Julia Brace, a blind and deaf mute, brought forth results beyod doubt surpassing the possibilities of the bloodhound's olfactory terminations.

In the rounding quarter of the eighteenth century it was considered the axiom of psychology that the senses should not be depended upon because of the mental deception of these five lenses by means of which we know or know not of the material world. In perceiving material objects the mind cannot be mistaken in any considerable degree, except by some natural or acquired defect in the bodily organs. How different—how very different it is in arranging the various relations and properties of objects and in that reflex action of the mind upon itself by means of which it is enabled to look back on its internal stored knowledge; for here imagination, attention, memory, as well as the corporeal organs, go to make up

the etiology of mental errors. It is only uttering a truth to say that these deviations from the direct course are not confined to the mentally deranged, but exist equally among men of the most healthy minds through mistaken judgments formed concerning the testimony of the witnesses of perception, yet here reason dissipates them. Many times reports of impressions are not correctly received.

The normal eye always exaggerates acute angles and underestimates obtuse ones. This is nicely shown by Zollner's lines. The phenomena of irradiation pictures to us dark objects smaller than light ones of the same size. You all, no doubt, have observed that the moon when in opposition appears smaller than when in conjunction, and that its crescent never seems to belong to the adjoining disk. Unwise would be the architect who would so design a column as to unsymmetrically divide an arch and thus bring out nature's illusion of discontinuity. It is because the visual effort required to see a horizontal line is not so great as that necessary to see a vertical line that the former looks shorter than the latter of same length. This optical illusion is taken advantage of by the mantua-maker, the artist, the paperhanger and the furnisher.

There is a strong tendency in man to see that which he desires to see. If this were not so, how could the fake medium succeed? It is indeed a very prolific source of error. We know how an interested witness not far distant, anxious to have the criminal detected, erred with reference to the identity of the suspected person, and how this same witness was quick to soon afterward positively identify another who showed no strong marks of resemblance to the former one. These mistakes are not infrequent and do not especially reflect upon the honest witness, but are what make criminal courts slow to take at face value the testimony of an interested party. They show that judgments concerning the testimony of sensation are not to be too much depended upon.

In every perceptive act the mental element is an important one. The mind often refers pain to the site formerly occupied by an amputated member. A fixed attention seldom fails to cause us to misjudge the location, maybe the direction, of sound. It is unnecessary to here dilate upon the illusions of movement experienced at the beach or at the railroad station. A former patient of mine maintained that he could perceive the rapid whirl of the globe upon its axis. A few similar cases have been recorded. Although such would be only the perception of an actuality, yet it could be due only to blotted brains.

Without doubt ideas have other sources beyond the end organs, because we gain knowledge of hunger, thirst and other bodily needs, of disease and of danger by means of organic and intellectual sensations, and experience enables us to locate them. Stimulation may occur, too, from mechanical jars of the central nervous organ and from changes in the quality and quantity of its blood supply. Before the youth becomes skillful in skating he realizes that stars may be seen subjectively, without any excitation being conveyed to the eye from without. The same effect takes place when we snuff some volatile salts. While this is all true, yet the plaintiff's claim at a trial of unusual interest in Germany that on a very dark night illumination from these sudden bursts of light of internal origin, caused by blow after blow upon the head, enabled him to see the face of his would-be assassin plainly, was refuted by all scientific evidence. These retinal flashes have not the power of imparting light to external objects. Subjective impressions frequently arise from the nervous apparatus being stimulated by internal somatic causes.

Knowing all this, does it seem strange to say that anatomy and physiology have prepared a fertile soil for pathology here as well as elsewhere? Pathological exaltation of organic action of the psychosensorial cortical centers may produce the highest degree of false perceptions characterized as hallucinations, while those changes or modifications by the sensorium of sensations actually arising from outward excitation are mistaken perceptions known as illusions. The former seldom occur except pathologically; the latter are common in all mental conditions. Certainly here is ample range for novel observations. From the beginning of mankind down to the present moment, both the former and the latter have held a great sway in the world's history. Their character is of the highest importance, furnishing a key to the singularities and eccentricities of the former individual

himself. He who hears a voice announcing his wealth or rank only may be quite harmless, but the one who receives commands to commit acts of violence toward himself or others requires careful watching or restraint.

Nothing could be more incorrect than the statement of an author in his new work that false perceptions of more than one sense are rarely present in the same individual. In fact, it is hardly the rule for a single sense alone to be thus affected. In sanity, those of sight are more frequent than any other sense; in insanity, those of hearing, because its center is in closer proximity to the intellectual region than that of sight. The relative position of the area affected is the pathological indicator directed to the extent of impairment of reason's faculties. Numerous are the cases where unhealthy states of the organs producing morbid sensation form the basis of false beliefs of the insane. Their genesis is sometimes due, too, to the blood supply being altered, thus affecting the brain molecules. Hallucinations may be seen with one eye or heard with one ear only. An animated dialogue is sometimes sustained with all the force of reality. Sometimes these sensations occurring entirely within the patient's own head are corrected by the testimony of others, but more often they are not. Here lies one of the greatest principles of treatment. A preponderance of certain health perceptions *can*, and if properly utilized *will*, contradict and overcome that which results from disease.

The sensorial organs may be so powerfully influenced by a dream as to leave the sensation of the impression on awakening, but they leave us rapidly, while in the insane they are not thus dissipated. Visual impressions are readily stored up by all of us. Were this not possible, Milton when blind could not have written a poem composed so largely of this imagery as "Paradise Lost;" nay, that branch of natural science calling for the most careful observation and the keenest eyesight could not have been mastered by Huber, who was blind from his seventeenth year. Behold a lunatic with his eyes open and his sight closed, or one with his ears open but his hearing shut, whose sensory ganglion was so forcibly struck from experiences before the special sense was closed that a shadow becomes a reality, and then you can realize that internal excitation is capable of reproducing sensations in consciousness without the agency of the end organs; for hallucinations of sight occur as readily in the blind, of hearing in the deaf, and so on, as when the end organs perform their work. To draw from my own experiences, a blind lunatic was firmly convinced that he could see gold nails on his fingers and beautiful flowers adorning the room; a deaf one that he received telephonic revelations from heaven inspiring him to convert the world. How else can such curious phenomena be explained except that sensations are laid up in memory as ideas reproducible in consciousness without the aid of the mind's special messengers? A linguist who is mentally deranged may hear voices in different languages.

In health and in disease the central nervous organ is excited from within almost as frequently as from without. From the fact that hallucinations of sight take place in the blind and when the optic nerve is atrophied, we learn that the retina is not the seat of false visual images as it is of mistaken and perverted ones; therefore the pathological character of illusions and hallucinations differs. Closing the eyes will of course dispel the former, but seldom the latter. To not believe false beliefs is to repudiate the testimony of the witnesses of perception, for many times they are real sensations forming channels through which reason flows. Until the basis is corrected the chain of reasoning cannot be changed by legerdemain or otherwise, so that trick and artifice, once so popular in the treatment, have been relegated into disuse. Even objective reality often fails in influencing perverted or false sensation. Until the foundation is made aright the reason will remain unchanged.

Not only are painful sensations common among the insane, but also tactile hallucinations and even delusions of physical transformation are not uncommon. One whom I vividly recall fancied that he had become petrified; another that his body had been metamorphosed into that of a wolf; and still another that all his bones had changed into flesh. Morbid sensation was surely responsible for the false idea in each case. Many are the fantastic transformations which objects out of the brain may undergo. Sensations which cause the sufferer to declare that insects are crawling on the skin or destroying

some vital organ sometimes occur. These peculiar conditions causing discomfort in this or that part of the body are often the outcome of lesion of the organ. When the morbid feeling subsides the morbid thought usually vanishes.

Inasmuch as these sensations are strange, mysterious and unaccountable, patients likewise fly to the same sources for the causes thereof. The fashion of the age has much to do with the causes assigned for the sad state by those affected. In times gone by lunar vicissitudes, eclipses, comets, devils and witches were to blame; so said the people—those affected and those not affected. At the present day we all know what morbid sensation has to do with them, yet the afflicted seem to think they are due to electricity, hypnotism, etc. Pathological sensation is always shaped by the stores of knowledge, the education and the experiences of the individual, therefore continually keeps pace with the advance of the times.

By being familiar with the importance and significance of morbid sensation, the family practitioner would frequently be enabled to ward off impending insanity at its onset. Just at this time, when man is as near sanity as insanity, the senses begin to wander and morbidly deceive because of an incredible acuteness or intenseness in sensation, and great ends may be reached. Just at this time most can be accomplished by the agents of materia medica and by moral suasion exercised by man over man. The therapeutical treatment of these conditions is an extensive and important subject—one which cannot be dealt with here. Its area is found to be spread over a large portion of the area of materia medica. To lay down a broad rule, medicines have no special action of their own in these affections—they do not operate peculiar to the peculiarities, but are called for in general to restore corporeal derangement and are to be used under the same conditions and for the same purposes as in general medicine. They cannot be taken up separately in this connection, as this subject alone would require a volume for its successful exposition; therefore will be passed by as a whole.

Allow me to now swing to the science of the human mind—to its physiology, where the effects of mental attention on the bodily organs at once appear. An intimate inter-relation surely obtains between mind and sensation. The latter cannot be studied apart from the former, amid which it invariably takes place. On the other hand, all functions of the mind are followed by sensibility of some sort or other. Thus you see a reciprocal relation exists—each is affected and influenced by the other. Morbid states of sensibility are concrete diseases affecting the mental operations with coexistent disorder of the sense organs. Without touching upon any abstruse points of metaphysical inquiry, physiological experiments have proved that the activity of a region, organ or part depends greatly upon the blood supply to it. It is in conformity with a general law that the effects of habitual repetition of stimulated attention to particular organs or parts of the body alters the supply of blood to them, creates unusual sensations in them and in time deranges their functional state. There is no difficulty in generating local sensations by merely seeking for them and expecting their occurrence. It is as much the duty of our profession to remove distress occasioned by subjective painful sensation as to cure real morbid states of organic structure. This may be accomplished by passing beyond materia medica and utilizing mental agents on the bodily functions, for they cannot be safely disregarded in the preservation or restoration of health.

It is too true that we prefer to see our fellow-man in distress and misery rather than to cure him of his affection except by means of powder, potion or pill. We are moving slowly but surely to the patient's mind itself for the basis of treatment of morbid nervous troubles occasioning pathological sensation. Mental philosophy itself calls for the cultivation of the reflection, the training of the observation and the governing of the thoughts in their treatment. While but little advantage could ever come from attempting to prove the falsity of morbid sensation in any form, yet irreparable damage results from admitting it to be true. In the charming pages of quaint old Burton is found the somewhat remarkable statement that "if they say they have swallowed frogs or a snake, by all means grant it and tell them you can easily cure it." The fallacy of dealing with pathological feelings by such procedure was completely exposed long ago.

It is a hard fact to admit, but neverthe-

less true, that the charlatan can sometimes actually cure hypochondriasis, neurasthenia, hydrophobia, hysteria, some forms of incipient insanity and other real diseases after the scientific physician has called into use his most potent remedies. Now if the empiric can really effect such cures, what could not be accomplished if the medical profession would give mental agents due attention? Certainly, wonders indeed. And, too, without resorting to their nefarious methods. As the wise man of old said, "*Fas est ab hoste doceri.*"

The time is comiug when every medical college will have a chair of psychology, and the ways and means of laying out the road to health for the patient's mind will open a scientific field of broad dimensions. The time is coming when treatment of morbid states of the end organs of sense through the medium of the inner man will rest upon organized knowledge for support. The time is coming when the scientific solution of the mysterious relations of mind to the complex and subtle organization of matter will give medicine its highest character as a science. And then our profession will find it unphilosophical to attempt to separate mind and matter in practice, so intimately are they associated; indeed, both being parts of one great united system of reciprocal action and mutual contribution. May God speed the advent!

A PRACTICAL STUDY OF SERIOUS ABDOMINAL CONTUSIONS, WITH A CLINICAL REPORT OF TWENTY-ONE CASES.*

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REPORT OF CASES—*continued.*

Case XIV.—Contusion of abdomen. History: Patient male; aged thirty-six; single; admitted to hospital May 23, 1894. Diagnosis: Contusion of abdomen, rupture of intestine, internal hemorrhage and dislocation of right shoulder.

The subject of this history was a hearty, muscular man of about the average height and weighed about 225 pounds.

In his early boyhood he met with an accident by which he lost his right leg, and as a substitute he wore an artificial member.

About two hours before he was brought to hospital he started out for a drive with a powerful but badly broken colt. While driving by a trolley electric car the horse was startled by the sound of the gong and undertook to run away, but his muscular driver was too much for him and held him in. He then reared, plunged and tipped the carriage over, but he was manfully held in. He now became furious and commenced to violently kick, striking his unfortunate driver with terrible force, first dislocating his left shoulder and then sinking his hoofs into his abdominal walls. The driver quickly went down under this battering and let the reins fall. Succor was promptly at hand and an ambulance soon arrived. I saw him immediately after admission to the hospital. He was then in great distress, complaining mostly of the abdomen. The first thing done after he was freely stimulated was to reduce the dislocation. His abdominal pain was most agonizing, and though morphine was administered in very large and repeated doses and hot stupes were applied over the abdomen, relief was not complete. His state of shock was most profound. The skin was marble-white and gave free issue to a cold perspiration. The hands and feet were rather cool. The features were pinched, the eyes sunken and lips bloodless. His urine drawn away with the catheter was normal and bloodless. Over the abdomen there was no trace of injury, neither abrasion nor ecchymosis. But it was everywhere painful, and though both pupils were contracted from full opium narcosis, still he groaned with pain. Tympanites was well marked, the distention being so great as to interfere with the movements of the diaphragm. As the abdomen was so deeply covered with fat, it

*Read at the annual meeting of the New York State Medical Association, October 10, 1894.

was quite impossible to locate any of the organs or determine any local lesion. With his legs drawn up and the chest raised he was most comfortable. Treatment was actively instituted for the dual purpose of annulling pain and overcoming the effects of shock, and next with a view of arresting peristalsis and securing quiet to the injured viscera. From the marked anæmia it was evident that some important vascular organ had been lacerated and that there was internal hemorrhage. Of intestinal rupture there could be scarcely a doubt. The extreme and sudden tympanites decided this; besides, the agonizing, incoercible pain was quite conclusive proof. The pain of intestinal perforation may be distinguished by its quality, as it has been my fortune to verify in laparotomies on the living and on post-mortem examination on those who have died from intestinal lesions. In two hours this man received two grains of morphine hypodermically, besides nearly a pint of brandy, without wholly subduing the pain. After about three hours the pain came and went alternately in spasms, probably synchronously with the peristaltic wave or contraction of the abdominal muscles. His strength gave way rapidly, the pulse steadily weakening and the extremities colder. At 9 P.M. he died, just six hours after entrance. About half an hour before the end came the dying man informed his mother that "the pain was gone and he now hoped to have a sleep."

In this case an autopsy was denied us.

A kick from a horse, delivered squarely and with full force, is often terrible in its consequences. The skull gives way like an egg-shell under it. The thoracic cage, with its pneumatic buffers inside, will sustain it better than any other part of the trunk. The spine is remarkably resistant too, for among more than a hundred cases of spinal traumatisms which have come under my care I have never seen one in which the cord was implicated in which the injury was caused by the kick of a horse. But the abdomen is especially vulnerant to this quality of force, and statistics show that many of the mortal types of abdominal contusion succeed from such injuries. This man's general condition was so desperate from the time he entered as not to permit us for a moment to consider an exploratory laparotomy. The probabilities are that had we undertaken one, like the previous case it would have ended mortally before we could return him to his bed. As to the propriety of experimentation in the way of inflating the intestine through the rectum with air or gas for the purpose of verifying diagnosis, it does not seem clear what can be gained by forcing fæcal matter out through a perforation into the peritoneal cavity, or even should there be any reliance placed on the test at all, of what does it avail when to do an operation is to kill one's patient?

CASE XV.—Contusion of abdomen (compressive). History: Patient male; aged twenty-seven; single; admitted to hospital June 2, 1894. Diagnosis: Contusion of abdomen with fracture of last two floating ribs close to junction with vertebral column.

On the morning of the above date patient, who was the driver of an ice-wagon, was injured by a collision accident. He was seated in front, having on a little more than two tons' weight of ice, drawn by two horses, when another passing heavy team, moving in an opposite direction, collided with the front wheel of the left side of his wagon. The opposing vehicles came together with such suddenness and clash that he was thrown out on the right side, striking the ground on his chest. Immediately before he could extricate himself he was caught and run over by the front wheel of his loaded wagon, it passing obliquely across the wings of the scapular. In the frantic efforts of eye-witnesses to stop the team the frightened horses, instead of going ahead, suddenly turned, this movement bringing the hind wheel in such a position that it crossed the body just over the iliac and lumbar segment of the spine.

After being doubly crushed by this tremendous weight it was thought that he surely had been killed. He was in such terrible shock that the physician who was first called pronounced the case as quite hopeless, as he breathed only in gasps and was quite pulseless. After two hours' interval he had partly revived and an ambulance was called, when he was taken to the hospital.

Soon after he entered I saw him. He was yet in great shock, though coherent. He complained of severe pain all over the abdomen and over the hypochondriac region of the abdomen. He had twice vomited a bloody fluid, and urine drawn away

was blood-tinged. The two lower floating ribs on the right side were found fractured close to their vertebral attachment. There was free hemorrhage into the left pleural cavity which spread far into the tissues over the seat of fracture. The whole abdominal areas were extremely sensitive, particularly over the liver, and the symptoms of free intraperitoneal hemorrhage were quite unequivocal. The intestine had evidently escaped in this violently flattening-out process. There was a distinct mark of discoloration and abrasion where the front wheel passed, but none over the abdomen. There was no paralysis, though he complained loudly of severe abdominal pain. Morphine and topical applications had to be vigorously applied. Reaction was gradual and fairly reëstablished, when pleurisy and peritonitis set in. Constipation, abdominal distention and exquisite pain announced the latter, and diminution of respiratory murmur, with acute pleuritic pain and the friction rub, determined the former. Opium, stimulants, frequent enemata, and with the free employment of mercurial inunction over the integuments investing the thoracic and abdominal viscera, seemed to maintain him and keep inflammation under control. His youth and fine constitution contributed their share in holding him up until the storm of reactionary disturbances had blown over and function had become reëstablished.

During the second week he was in the hospital his integuments became stained by a moderate tinge of an icteric hue, the hepatic area was very sensitive, and other associate symptoms pointed to an attack of traumatic hepatitis. His recovery was gradual, but steady, and after the third week he was able to sit up.

July 9th he left the hospital quite recovered, his strength and appetite restored and all his functions restored.

The features of special interest in the above remarkable case were, first, those referable to the spine. We had here demonstrated the fact that when the lumbar spine is crushed by compressive force the primary effects of it are manifest, first, through the abdominal organs which lie loosely anterior to it, which suffer through transmission, the inclosed *corda equina* always escaping, except when the force is applied with great impetus and is concentrated or when the underlying organs are mortally damaged. Secondly, the costal fracture. There can be no doubt but the elastic resilient ribs offered great resistance to the force brought to bear on the back, and so diffused it as to greatly diminish the immediate effect of its impact. Thirdly, the rapid resorption of the pleural and peritoneal hemorrhagic effusions.

The projecting pneumatic buffers which over-roof the liver and the stomach suffer their outer costal walls to be fractured in different places and scatter concentrated force in various directions when force is applied; the lung itself being lacerated before the abdominal organs are involved.

CASE XVI.—Contusion of abdomen (compressive). History: Patient aged thirty-two; married; brakeman; admitted to Harlem Hospital January 19, 1894. Diagnosis: Laceration of the liver with rupture of the stomach and urinary bladder.

At about dusk on the evening of above date patient, who was a new hand at railroad work, was assisting in making up a train in the New Haven yards. He stood on one track waiting for a train to move out on another. In the midst of the noise inseparable with moving trains in a freight-yard, and while he was watching another train, a car being pushed down the track that he was on by an engine, before he saw it hit him a violent blow on the abdomen and knocked him outside the rails.

He lay where he fell for nearly an hour before he was missed. When found he was unable to speak. He was brought into the freight-house and remedies were vigorously applied by attending physician. After three hours he rallied and was sent in to hospital. Was now conscious. He could speak in a feeble whisper and said he was dying.

At this time the hands and feet were chilled by that icy damp cold of death. No radial pulse. The sunken eyes, the collapsed nares and blanched skin clearly indicated that the end was near and that some large blood-trunk had been torn open. He died a few hours after entrance.

Post-mortem examination thirty hours after death. No discoloration of integument. Right rectus abdominalis ruptured through upper third. Peritoneal cavity full of blood and aliment; the center of the convex surface of the right lobe of the liver was the seat of a stellate laceration which opened widely the hepatic sinuses. Rup-

ture of the portal vein about half an inch above the confluence of its tributaries.

A rent about four inches long involved the posterior wall of the stomach, extending through all its tunics.

Another laceration was found running transversely across the fundus of the bladder two and one-half inches long. No bones were fractured.

This case was one which so fully demonstrates the destructive force which so generally attends grave railroad injuries. When a limb is mangled by a railroad smash we almost invariably find the tissues terribly mutilated above and below the point of injury, the integument often being devitalized far above it. And likewise in abdominal cases the extent of destruction is terrible. Two other cases of railroad injuries of the abdomen have come under my observation, but in both the moribund state had set in before the ambulance arrived to take them to the hospital.

CASE XVII.—Contusion of the abdomen, resulting in appendicitis; general peritonitis. History: Male, aged fourteen; admitted to hospital June 26, 1894. Diagnosis: Traumatic peritonitis following contusion of the abdomen.

Patient stated that ten days before, while standing on the rear of a vender's wagon filling a pail with potatoes, his horse suddenly started and he was thrown out, striking his body with great force against the upper rim of the wheel. He was somewhat dazed for a while, but was able to get up, having a moderate spasmodic pain in the right iliac fossa. He was able to keep at his work for three days; by the fourth the pain became so intense that he was quite unable to rise. Now medical aid was called and moderate purgatives prescribed. For three days he remained in bed without making any improvement. On the tenth day after injury he was sent to Harlem Hospital.

Condition on admission was very weak. Moderate vomiting; temperature, 104°; pulse, 118; respiration, 27; abdomen tumefied, exceedingly tender everywhere and suffering constant pain. No marks nor abrasions on abdominal walls. Free inunction of mercury over entire abdominal area; opium given freely; moderate enemata.

The following day much improved; vomiting ceased and thirst greatly diminished. Temperature, 99°; pulse, 94; respiration, 22.

June 28th. No pain in abdomen. Sitting up He was hungry. Temperature, 99°; pulse, 88; respiration, 21.

As he was now apparently convalescent and only needed a few days more of rest, and as our service was crowded he was transferred to Bellevue Hospital.

From the hospital records we learned that shortly after his arrival there serious abdominal symptoms developed. Dr. J. D. Bryant, into whose service he was sent, made incision into the median line and evacuated a large quantity of pus; irrigated, etc. The boy died the next morning. On autopsy the appendix was found perforated and gangrenous. This was a case evidently in which the starting-point of the trouble was in the abdominal contusion, which probably crushed the appendix. It has been a mooted question whether a traumatism can be regarded as an etiological factor in appendicitis. It is my firm conviction that it is.

This caudal appendage is indeed vermicular not only in contour, but also in its freaks and excursions. It may grope down into a hernial sac. It commonly lies down over the pelvic brim, its tip resting in the pelvic cavity. It often turns on itself and finds lodgment under the cæcum. Its tip has been found adherent to the liver, and in an abscess which was lately opened by myself to the right of and on a line with the umbilicus it was found fixed there.

When it hangs suspended over the pelvic brim it is particularly exposed to damage from such compression or contusion as will press it up against this sharp ridge. Possibly it occupied some such position in this case, though the autopsy notes do not state it.

In the parturient woman it can scarcely escape injury in this situation when the fœtal head becomes impacted.

Very recently a case came under my care in which delivery had been attended with great difficulty. From time of confinement the patient constantly complained of severe pain in her back and right loin. Four weeks after confinement a swelling appeared above the crest of the right ilium posteriorly. At this time she had well-marked symptoms of local peritonitis with general septic infection. I made a deep

dissection over the mass and came down on a cavity filled with gas, fæcal matter and pus. After free drainage a good recovery succeeded.

This was clearly a case of traumatic appendicitis originating at accouchement.

In this boy we saw well illustrated the insidious manner in which serious consecutive lesions may follow after an apparently insignificant abdominal injury at the outset.

Case XVIII.—Abdominal contusion; the body falling. History: Patient a male; aged forty-four; engineer; admitted July 17, 1894. Diagnosis: Contusion of the abdomen with lacerated kidney.

On the above date patient fell from the motor-house of a drawbridge to the driveway below, a distance of about twenty feet. In his descent his right side came with great force against a rail upright. In connection with the abdominal injury he sustained a Pott's fracture of the right leg. He was immediately transported to the hospital. On admission he was in shock and suffering great pain in his right side over the lumbar region.

He was seen by me the following morning. At this time he was free from pain unless he attempted to move. On the right side as far back as the spine, up over the four lower ribs, down over the crest of the ilium and for a considerable distance inward, there was a large discolored tumefied area. This imparted a sense of fluctuation and was everywhere flat on percussion. From the time he entered he complained of an intense desire to urinate. On the passage of the catheter the bladder was found to be distended with blood. This was more or less clotted, of a bright red color and mixed with urine.

The bladder was irrigated with a warm solution of boracic acid and local dressings applied over the seat of injury.

On the third day after admission he had a chill, after which symptoms of cystitis and a localized peritonitis over the seat of injury and the hypogastrium were well marked. From this time the passage of the catheter was so painful that cocaine solutions had to be employed each time to blunt sensation.

Symptoms of urethral fever gradually set in, sleep was irregular and he became feverish and fretful. The bowels acted well and he took freely of fluid nourishment.

After the first week he steadily failed in strength and symptoms of toxæmia steadily increased. After the end of the third week he drifted into a somnolent condition, in the mean time the urine continuing very bloody. He finally succumbed on the 10th of August from a mixed condition of exsanguination and urethral fever.

In this case we had an illustration of those urinary sequelæ which may follow when the kidney has sustained an extensive laceration or disorganization from violence, and such constitutional disturbances follow as may imperil life.

It was clearly evident from the physical examination that the kidney had been extensively lacerated and there was a large sanguinary and urinary leakage into the retroperitoneal tissues. The most serious complication, however, came from urethral and vesical irritation and fever.

For some cause, not by any means clear to me, in certain cases the most disastrous consequences follow the passage of the catheter into the bladder. To say that it is due to septic infection proves nothing. My own experience inclines me to dispute this view, for the reason that I have seen it develop when every antiseptic precaution was taken. On the contrary, we see those who catheterize themselves with stiff, solid old instruments as a daily practice for years with impunity, as far as infection goes. Hæmaturia in this case was so excessive and persistent as to produce a most pronounced anæmia, which so exhausted the general system as to reduce its resisting power to the effects of trauma.

Death in this instance was primarily and ultimately produced by renal and urethral trauma alone. The peritoneal inflammation remained purely local, as it did not spread beyond the parietal investment anterior to the kidney.

Case XIX.—Abdominal contusion. History: H. H., aged thirty; single; male; admitted to hospital August 4, 1894. Diagnosis: Contusion of abdomen, rupture of internal organs, internal hemorrhage and shock.

Patient was employed in excavating rock. On the day of injury he was struck with great force by a falling bowlder, which struck him over the umbilicus, and knocked him down.

It was at first supposed that he was

killed outright, but he soon recovered consciousness and the circulation became reëstablished; was immediately brought to the hospital.

On admission the extremities were cold and pulse was gone at the wrists; complained of great abdominal pain over the hypogastrium.

Evidence of free internal hemorrhage with rupture of the liver and deep vessels. No trace of injury over the integument investing the abdomen. No paralysis of extremities, but fæces and urine flow away involuntarily.

Stimulation and artificial heat made no impression, and he died one hour after admission, deep collapse continuing to the end.

In the foregoing case death ensued from internal hemorrhage, probably either from laceration of the liver or a rent through the vena cava.

In this case possibly we might suppose that an immediate abdominal section should have been performed, with a view of attempting to suppress hemorrhage, but when we come to practically deal with such a condition as was here presented, we appreciate how fallacious theorizing often is. Our man was in practically a moribund state when he was brought in. And, unhappily, often when we can detect the source of hemorrhage we are powerless to check it before alarming symptoms set in, that in order to avoid killing our patient we must desist.

Case XX.—Contusion of abdomen (percussive). History: Patient aged forty-two; married; laborer; admitted to hospital August 12, 1894. Diagnosis: Abdominal contusion with fracture of eighth and ninth ribs.

Patient, a carter, had unharnessed his horses and was about to put them into the stall, when another horse passing raised his hind legs suddenly and gave his driver two violent kicks with both hoofs, knocking him down.

For some minutes he was unable to raise himself. When he was brought into hospital was in great pain over the chest at the site of injury and over the umbilicus.

The eighth and ninth ribs were fractured near their chondral articulations and there was evidence of free hemorrhage into the pleural cavity. There were marks of contusion over the broken ribs, but none over the abdomen.

Complained of a steady severe pain in the epigastrium. Abdomen everywhere very sensitive. General condition fairly good. The chest was braced by adhesive straps and bandages. With hot aromatic drinks and warm stupes over abdomen pain was moderated and he rested quietly. This case progressed steadily toward recovery, and he left the hospital quite well after a two weeks' sojourn.

In this case the brunt of force was first received and neutralized by the costal walls of the thorax. The contusion of the abdomen was probably caused by the sudden kick, which probably, besides bruising the muscles and concussing the viscera, did little harm. The case properly belonged to what might be regarded as a parietal or extrinsic injury of the anterior boundary of the trunk.

Case XXI. — Abdominal contusion (compressive). History: Patient a driver; twenty-seven years of age; single; male; admitted to hospital August 27, 1894. Diagnosis: Laceration and contusion of the liver with severe compression of the stomach.

On the morning of this date, immediately after breakfast, a young man having loaded his wagon for market, and his horse being harnessed and standing yet in a covered shed, when he went behind the wagon for something the horse suddenly was startled and forcibly backed the wagon against the driver, who could not extricate himself. He was crushed with great force directly across the abdomen above the umbilicus, being caught between the back part of the wagon and the wall of the building. Immediately after backing the animal made a plunge forward, when the injured man fell to the ground in a helpless state. Stimulants were given him and he was sent at once to the Harlem Hospital. On entrance he was in great shock; extremities cool and he was almost pulseless. Was promptly placed in bed and restoratives given. Urine was drawn with the catheter. His state was so precarious during the first twenty-four hours that no attempt was made to do anything more than make a superficial examination. By this no sign of injury could be detected by any discoloration of integument over the abdomen. But he was very sensitive to pressure over the abdomen and liver and all the superior areas of the abdomen. During the first day in the

hospital he suffered from intense abdominal pain and hæmatemesis. The abdomen was hard and flattened through contraction of the muscles. Physical examination revealed the presence of fluid in the peritoneal cavity, which, judging from the sudden and extreme anæmia he suffered from, no doubt was a sanguinous accumulation. Moderate jaundice appeared on the third day, but the urine had a slight and evanescent bile tinge. Constipation persisted for the first six days. Traumatic peritonitis was unequivocal, though it was chiefly parietal and at no time took on serious symptoms. His recovery was gradual, and after six weeks in the hospital he left for home fairly restored, still, however, rather weak.

It was interesting to note here that after the fourth day a broad annular belt of discoloration appeared above the umbilicus which had not quite disappeared when he left the hospital.

This was an instance of typical hepatic traumatism in which the gall-bladder escaped. Though breakfast had been eaten less than half an hour and the stomach was distended with food, it escaped rupture; still from the free vomiting of blood which followed there was no question of extensive laceration of the internal glandular and muscular layers. The liver was damaged by being crushed between the arched anterior shafts of the five lower ribs and the spine. The liver, in common with other solid viscera of the abdomen, suffers trauma with singular tolerance and in the healthy, vigorous subject possesses great recuperative energy. This was well illustrated here.

The development of the line of discoloration on the fourth day was a phenomenon which we commonly witness over those soft parts which are not supported by an osseous understructure of resistance.

Discoloration of the integument depends primarily on effusion of blood from the capillaries and consecutively on the chemical changes and evolution of gases. These depend on the circulation; therefore why when reaction does not set in these phenomena are absent.

COMMUNICATIONS.

WISDOM AT THE BEDSIDE—FACTS AT THE POST MORTEM.

JOHN J. TAYLOR, M.D., Streator, Ill.

In the month of June I was called in consultation to see a gentleman lying ill in St. Mary's Hospital. The man was apparently about fifty years of age. His face was flushed as with hectic, rather spare and slightly pinched and bore an anxious expression. The eyes and skin were icteric. His respiration was about 40 and the pulse varied from 125 to 140. Temperature 102° to 103° F.; the tongue was dry, rough, heavily coated yellowish to dark brown, and decidedly pointed and tremulous when protruded. Bowels constipated; urine scanty and of very dark color. Occasional vomitings; loss of appetite. Skin dry and husky. Mind clear. The body was very thin. The bedding thrown back and his chest bared showed quiverings of the tissues at the point of the sternum from the heart's action. The left ribs did not rise and fall; the intercostal spaces were obliterated and the left side seemed somewhat larger than the right, and by measurement proved to be so, though by only about one inch. Below and extending above the lower edge of the eighth rib, about half-way between the sternum and vertebræ, was seen a white line or cicatrix about a half-inch long, alleged to have been produced a number of days previously. Percussion revealed a normal condition of the right lung, but on the left from the third rib down there was a high, dead sound characteristic of a solid body, such as emitted by percussion over the liver. The stethoscope detected a high-sounding respiration, but otherwise natural condition of the right side, while on the left side above the third rib râles and sibilant bronchial respiration were

noticed. Below the third rib no sound was detected save the faint, muffled beating of the heart.

My diagnosis was that the left pleural cavity was filled with a fluid, probably sanguino-purulent in character, the result of the wound at the site of the cicatrix mentioned. From the time of the alleged injury three weeks previously the patient had fever constantly. Notwithstanding antipyretics had been sedulously given, only temporary benefit was derived from their use. Septicemia was the cause of the fever. My advice was to tap the chest and draw off the offending matter; the first and greatest chance to save the patient. In any event the prognosis was unfavorable.

When paracentesis thoracis was advised the friends and patient were not ready for so radical a measure. I did not again see the man for a week. In the mean time another consultation was held, and the consulting surgeon assured the friends that there was no fluid in the cavity, or if there was it was only a small amount, which would be absorbed when the traumatic pneumonia terminated. As the patient grew worse I was recalled.

The patient was now less inclined to eat, could not rest and had lost strength. The same general symptoms were present. Along the left chest walls, particularly over the pectoral muscle, there was considerable infiltration-edema; the back of the left hand was also swollen. The patient now insisted and the friends were ready for an operation. "Anything to give me relief," he said. So the time was set for that afternoon. The Sisters, ever willing and efficient, had all in readiness at the appointed hour. The clothing removed, an oilcloth was placed beneath the patient; he was washed with hot water and soap, followed by sponging of the chest wall with sterilized water. An incision was made through the skin a fraction of an inch from the cicatrix mentioned and just above the ninth rib, and the fine Allen aspirator trocar was thrust through the intercostal muscle close to the upper edge of the ninth rib into the pleural cavity for two inches. The needle was withdrawn and a very dark sanguino-purulent fluid escaped into a two-quart basin, which was filled three times, six quarts having been drawn off. When the fluid failed to run it was pumped out with the aspirator. The cavity was thoroughly washed out with sterilized water until the water came away perfectly clear.

The patient was somewhat fatigued, but expressed himself greatly relieved. The distress for breath seemed almost gone; the heart's action was improved. The patient slept several hours that night, the first sleep in a long time. His appetite was slightly improved for a day or two; the body temperature was somewhat diminished; the pulse slowed; vomiting ceased. But the improvement was ephemeral and deceptive, for in a few days it was evident that he was losing ground. The day following the operation, in different parts of the chest could be heard coarse, moist râles with sibilant bronchial respiration.

Something like a week passed, and it was deemed best to repeat the tapping. This was done, with thorough washing out of the pleural cavity after the removal of a quart of purulent fluid. The respirations continued at from 35 to 45. Emaciation progressed. He became more icteric and, save the cough and lack of expectoration, he looked and acted like a man suffering from consumption. I saw the patient perhaps a half dozen times and used the stethoscope and percussion each time. I was able to hear a respiratory murmur, although weak, over different portions of the left chest, the râles and sibilant respiration being present in every examination. Three days before he died I saw him, and the physical signs showed some reaccumulation of fluid. He was very much exhausted. A whizzing sound, similar to that in emphysema, was heard. The tongue was dry as a chip and very dark. Urine very scanty and dark. Pulse feeble. In fact, the man was gradually passing from life into the shadow of death.

Post Mortem: On invitation from the attending physician to be present at the autopsy, I learned that the coroner wanted a Democrat to hold the post mortem, saying: "This is a Democratic administration and we Democrats must have all there is in it." So as a looker-on the following conditions were observed: Complete rigor mortis; the usual incisions in the skin made and the costal cartilages separated, the manubrium and cartilages were tilted up over the face and the chest cavity was in full view; the left pleural cavity con-

tained a large quantity of purulent fluid which was poured out by tipping the body on to its side and the removal completed with a sponge; the pleura, at two points, was entirely destroyed, exposing the roughened ribs; the pathological lung measured seven inches long, four inches wide and an inch in thickness—estimated; was almost black and on being placed in water sank; it was very friable; had been attached to the upper and front wall of the chest; the right lung was normal or nearly so; the liver was enlarged, slightly lighter in color than natural, and weighed six pounds; in the abdominal cavity, in the lumbo-hypochondriacal region there was a quantity of serum; the omentum was puckered up and was slightly adherent to the diaphragm, showing that a limited peritonitis had existed; heart and kidneys normal; fibrin clot in heart.

The surprises were the great amount of pus present; the pathological condition of the lung; the ribs denuded at two points, and that life was so long retained despite such profound pathological changes. The left lung was absolutely of no physiological use, so that oxygenation was carried on by the right lung alone.

How soon did the lung collapse? Did it expand at all after the first paracentesis? Whence came the râles and the sibilant and whizzing sounds perceptible to within a few days of death? Was the enlarged liver due to septicemia or to the tippling to which he was addicted? Was the local peritonitis produced by some small perforation? Did it come from the pleural cavity above or was it the result of septicemia? What would have been the probable result had the cavity been tapped the day after the injury, when it contained pure blood from the wounded intercostal artery? Would the compressed lung have been likely to be restored a week after the injury? Was the large quantity of pus formed partly due to changes in the already accumulated blood?

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

TREATMENT OF PHLEGMONOUS INFLAMMATIONS WITH AN ALCOHOL DRESSING.

Dr. Salzwedel (*Centralblatt f. Chirurgie*, No. 45, 1894) is an enthusiastic advocate of a permanent alcohol dressing in phlegmonous and similar inflammatory conditions, claiming to have obtained with it ideal results. The inflamed region is washed with ether and a thick layer of cotton soaked in alcohol is applied. This is covered with an impermeable dressing material in which holes have been made to assist slight evaporation, otherwise the alcohol would act too caustically. A cambric bandage is then applied over the whole. The dressing is renewed every twelve to twenty-four hours according to the severity of the case; later, after subsidence of the swelling, every two or three days will suffice. Any open wounds may be covered with mull and over this the alcohol-soaked dressing be laid. A 60–90 per cent. alcohol is employed. The swelling and fever rapidly fall and abscesses form rapidly. These should be at once incised and the alcohol dressing be continued until healthy granulation or complete healing follows. Furuncles rapidly disappear or come to a head under this treatment; acute and non-tuberculous glandular inflammations also are favorably influenced. Suppurating buboes should not be tamponed with alcoholized cotton, as it is too caustic. In erysipelas it has given good results. Freshly infected wounds may be washed out with alcohol, for it penetrates into the depths and prevents the formation of abscesses.

POISONING FROM A BELLADONNA SALVE.

Dr. Melzer (*Memorabilien*, No. 6, 1894) prescribed a salve consisting of belladonna and lanoline (1:30) in a case of pruritus of the anus in a female. Although the itching soon disappeared, she had the salve prepared several times and continued to

*In charge of the translator, F. H. Pritchard, M.D.

use it daily. For several days she had complained of extreme weakness in her legs, dizziness, nausea, headache, a bitter taste in her mouth, great dryness and a scratching sensation in her throat, disturbances of sight and a sensation of great pressure over the eyes. The pupils were found to be dilated and her pulse increased in frequency. After discontinuing the salve improvement followed, with a complete restoration to health in several days. The skin around the anus was intact.

FORMULÆ FOR THE USE OF CHLORAL EXTERNALLY.

Dr. Brodnax (*La Semaine Médicale*, No. 63, 1894) recommends the following formulæ for the external employment of chloral:

In cutaneous pruritus from urticaria, measles or other eruptions:

Chloral.....	aa o | 50	grs. xijss
Carbolic acid.....		
Olive oil.....	o | 5 jss, gtts. xxx	

Apply locally.

In toothache:

Chloral.....	aa 5 | o	5 j 1-4
Camphor.....		
Carbolic acid.....		
Glycerine.....		

Introduce a ball of cotton moistened with this mixture into the cavity.

In earache:

Chloral.....	ãã o | 50	grs. xijss
Camphor.....		
Carbolic acid.....		
Castor oil.....	15 | o	5 iv

Instill a few drops of this mixture, previously warmed.

In acute coryza:

Chloral.....	o | 50	grs. xijss
Castor oil.....	15 | o	5 iv

If applied to the nasal mucous membrane after cleansing of the surplus mucus this mixture will arrest the secretion, calm the irritation of the mucous membrane as well as the accompanying headache.

TREATMENT OF INFECTIOUS DISEASES BY IRRIGATION OF THE NASO-PHARYNX.

Dr. A. Heller (*Wiener Medizinische Presse*, No. 47, 1894), believing that the majority of infectious diseases are caused by inhalation of the pathogenic germs and that their first localization is in the upper respiratory passages, has been in the habit during the past twenty-five years of employing irrigations of the naso-pharynx in these affections with the best results. He uses a simple rubber ball with a small tip and injects water which has been boiled and allowed to cool, though any disinfectant may be added. The temperature may vary according to the case. The head is held in the ordinary position and the stream is thrown horizontally through the open mouth two or three times on each side of the pharynx with a slight and equal pressure. The first irrigations are followed by a rapid fall of the temperature and a feeling of ease; the local symptoms, if present, also improve at the same time. The result is most striking in facial erysipelas and in various forms of tonsillitis. In diphtheria he claims that proper irrigation is able to act as a substitute for tracheotomy. He also recommends warm-water irrigations in whooping-cough, where they cause a rapid diminution of the attacks of coughing and a decided shortening of the disease; in scarlet fever and measles and in swelling of the cervical lymphatics, where there is often a naso-pharyngeal affection at the root of the glandular involvement. Also in tuberculosis, where the irrigations not only act as a preventive, but also as an actual therapeutic agent; in typhoid fever, articular rheumatism, etc. In pneumonia, bronchitis and bronchial catarrh he believes the irrigations to be an active expectorant. He finally advises their use in eczema of children, which he holds chiefly to be due to an auto-intoxication by the naso-pharyngeal mucus, as well as in the various facial neuralgias.

EXTRACT OF SPLEEN SUBCUTANEOUSLY IN MALARIAL CACHEXIA.

Dr. G. Cousin (*La Semaine Médicale*, No. 63, 1894), in two cases of malarial cachexia with considerable enlargement of the spleen which had resisted the usual measures, employed with success a filtered extract of the fresh spleen of sheep hypodermically. He commenced by injecting one gram of this extract, carrying the dose later up to eight to ten grams. These were made every day, and with the immediate result that the quantity of urine was increased, occasionally causing profuse sweats and a slight rise of temperature. Locally there were observed three times small nodules of the size of a hazel-nut. The spleen rapidly decreased in size, while the accompanying pains vanished, the appetite and strength reappeared and the

patients' weight and number of red-blood corpuscles were augmented. After about thirty-five injections the patients were cured.

TOBACCO-SMOKING IN DISEASE.

Dr. Jankau (*Zeitschrift fuer Krankenpflege*, No. 7, 1894) in many cases regards moderate smoking as indicated, and especially where there is an express desire. In the majority of surgical affections it is permissible, with exception of convalescence from operations upon the bladder and abdomen. Patients with diseases of the eyes, nose, throat or pharynx should never smoke. The internal diseases which would not permit smoking are peritonitis, typhoid fever and similar affections. In stomach affections smoking may be allowed if the smoke be filtered. Patients with organic heart diseases should smoke as little as possible. In lung diseases, under certain circumstances, he would hold smoking to be indicated; also in syphilitics. In those with nervous diseases there is no general rule; sudden withdrawal often does harm, while in cardiac neuroses only a very weak tobacco with filtration of the smoke is allowable. To smoke in the sick-room where there are several patients present is hardly to be commended. The best time to smoke he would believe to be several hours after meals.

BELLADONNA IN SKIN DISEASES.

Dr. Eliza Dunbar (*La Semaine Médicale*, No. 63, 1894) has found belladonna, the use of which is almost limited to the treatment of itching affections of the skin by external application, also to be of actual value in certain other skin diseases. Thus she has succeeded in curing an obstinate case of exfoliating dermatitis and several cases of eczema, which had resisted the usual measures, with the internal and external use of the tincture of belladonna. In the management of pruritus of the vulva and other local pruriginous affections she has obtained good results with local applications of a mixture of the tincture of belladonna and the perchloride of iron or with an aqueous solution (10 per cent.) of the sulphate of atropine.

TO ADMINISTER CASTOR OIL AGREEABLY.

In the *Medicinische Neuigkeiten*, No. 45, 1894, in giving castor oil to children it is advised to pour the oil upon a lump of coarse brown sugar; the sugar soaks up the oil and disguises the taste. Adults might object to this sweet taste, in which case a pleasant emulsion may be made by shaking a teaspoonful of the oil in a bottle half-filled with warm milk; an agreeable emulsion is formed which neither tastes nor smells of the oil.

LOCAL TREATMENT OF ULCERATING SYPHILIDES.

Dr. Mauriac (*Revue Internationale de Médecin et de Chirurgie Pratiques*, No. 18, 1894) in the local treatment of ulcerating syphilides habitually employs the following salve:

Calomel..... }	āā 1	o	grs. xv
Oxide zinc..... }			
White vaseline.....	26	o	ʒvj, grs. xxx
Starch	3	o	grs. xlv

PERMANGANATE OF POTASH IN SNAKE-BITES.

Dr. Lacerda (*Norsk Magazin for Lægevidenskaben*, No. 10, 1894) advises the subcutaneous injection of a solution of permanganate of potash both around and into the bite in the treatment of snake-bites. In the very poisonous foreign varieties a 5 per cent. solution may be necessary. In adder-bites Dr. Selldén, a Swedish physician, has found a 1 per cent. solution sufficient. The injection must be done as soon as possible. Ligation of the bitten limb will retard the absorption of the virus, yet not over twenty-five minutes.

STRYCHNINE IN SNAKE-BITES.

Dr. James McNish (*Australasian Medical Gazette*, No. 3, 1894) reports the case of a butcher, aged forty-five years, who was bitten by a poisonous brown snake upon the hand. The man was of powerful build and not under the influence of fright from the bite. He had himself applied a ligature, sucked out and scarified the bite with his pocket-knife. He came to the office and while joking over the bite, after eight minutes he suddenly fell to the floor from the chair insensible, with dilated pupils and eyes turned upward. Fifteen minims of liquor strychninæ were immediately injected into the arm; marked improvement soon followed, so that with aid he could be moved about. He seemed very

sleepy and begged to be permitted to sit down a moment. Alarming dyspnœa soon developed, when another injection of ten minims of the strychnine solution was given; decided improvement followed. A second dyspnœic seizure came on accompanied by violent retching. He was then put under a cold shower-bath and brandy injected hypodermically. Breathing then became normal and he expressed himself relieved. Three further relapses then followed, which were treated by injection of strychnine, the cold shower-bath and black coffee. The next day he was over the worst and felt well beyond a feeling of nervousness, with slight weakness of the general nervous system, while at the site of the wound there was a sensation of numbness and tingling. The reptile was found to be a brown snake common to North Queensland, four feet six inches long, with well-developed poison sacs capable of holding ten to fifteen minims of poison; when examined they were quite empty. This is the fourth severe and genuine case of snake-bite which the writer has saved by the strychnine treatment. They were all accompanied by violent symptoms and could not be attributed to fright.

PERMANGANATE OF POTASH IN PHOSPHORUS-POISONING.

Dr. Antál (*Hospitals-Tidende*, No. 46, 1894) recommends the permanganate of potash as an efficient antidote to phosphorus. It alters the poison to phosphoric acid, which is comparatively harmless. It cannot be employed in concentrated solutions on account of its caustic properties, but he has observed from animal experiments that a 1:1,000 to 1:100 solution is easily tolerated. He administered a fatal dose of phosphorus to ten dogs; three were not treated by antidotes, yet received irrigation of the stomach. The other seven were treated, without washing out of the stomach, with a pint of a 1½–2:1,000 solution of the permanganate and administered from a few minutes to two hours after; this dose of the antidote was repeated three to four times. All seven recovered and remained in good health. In human beings he would advise giving at once from a pint to a quart of a 2–4:1,000 solution and to repeat the antidote a few times at half-hour intervals. Hajnos has employed this method in two cases of phosphorus-poisoning in man, administering the antidote a half-hour after. Erdoes, two hours after the drug was swallowed in a very large quantity, gave every five minutes a wineglassful of a 1–2:1,000 solution until in all four quarts were drunk. At the same time an injection of apomorphine was given and the patient recovered.

STRYCHNINE IN PNEUMONIA.

Dr. Percy Kidd (*La Sperimentale*, No. 34, 1894) speaks highly of the use of strychnine hypodermically in the treatment of heart exhaustion in croupous pneumonia and other acute pulmonary states of inflammation. It seems to have a sedative and strengthening effect upon the nervous centers controlling the heart and respiration. It will frequently succeed where alcohol and ether fail. He advises its subcutaneous use in doses of one to one and a half milligrams. The condition of the pulse is the chief indication. As soon as it grows small and frequent or the respiratory movements become feeble it must be injected. The results are apparent in ten to fifteen minutes in an increase of the force of the pulse-beat and the respiratory movements. Though in general one injection every twelve to twenty-four hours is sufficient, it may be administered more often, even every two hours for three or four times, to continue it at longer intervals, as the occasion requires. In alcoholic patients it also acts well, calming the delirium and giving the heart and respiration increased strength by its action upon the cardiac and respiratory centers.

STERILIZATION OF CATHETERS.

Dr. Kutner (*Muenchener Medicinische Wochenschrift*, No. 45, 1894) advises exposing catheters to the action of hot steam as an efficient means of sterilization. Before one is introduced into the bladder an irrigation of the urethra must be made. For this purpose a 4 per cent. solution of boric acid is to be recommended. As a lubricant a borated glycerine he has found most serviceable. This is prepared by adding 146 grams of anhydrous glycerine to 150 grams of a 4 per cent. solution of boric acid; boric acid is then added to saturation.

BORAX IN EPILEPSY.

Drs. G. Angelucci and A. Pieraccini (*La Sperimentale*, No. 31, 1894), after an extensive use of borax for three years in the treatment of epilepsy where careful record of the number and intensity of the attacks was kept before, during and after treatment, have come to the conclusion that it is a very useful remedy in essential epilepsy, reducing the frequence of the seizures, sometimes suspending them entirely or substituting for the convulsions slight vertiginous attacks or "spells" of absence of mind. It rarely is inactive. It often moderates the character of the epileptic, rendering him more tractable and calmer. Its use should not be too prolonged, in general not over three months, and the dose should not exceed six grams a day, as it may give rise to grave stupor from which one recovers with difficulty. When signs of saturation of the system, as cutaneous eruptions, acne and eczema, desquamation of the skin and falling out of the hair, mucous vomiting, pronounced pallor of the forehead and a tendency to corpulency, appear, it should be immediately suspended. It is best given dissolved in warm water with a little sirup of orange three times a day, immediately after meals, commencing with sixty centigrams and then increasing to one gram, one gram and twenty centigrams, and later reaching two grams a day. Thus administered it will not cause disturbances of the stomach and intestines as when given in one dose at one time in the morning on an empty stomach. It also has the advantage of being inexpensive.

SCRUBBING OF INFECTED WOUNDS.

Dr. Ramm (*La Semaine Médicale*, No. 63, 1894), in order to obtain disinfection of tuberculous wounds or those which have been infected secondarily, advises scrubbing them energetically with a sterilized nail-brush dipped into an antiseptic solution. He has obtained excellent results with this measure.

TRUSS PADS FILLED WITH GLYCERINE.

Dr. A. Landerer (*Centralblatt fuer Chirurgie*, No. 41, 1894) for the past four years has been using trusses with pads filled with glycerine with satisfactory results. Their form is the ordinary one; the pressure exerted is soft, more uniform and yet more forcible than that of the usual pads. In contrast with those they never become hard and are also quite durable, lasting for one and a half years. They have the advantage over the ordinary ones in that they do not thin the tissues about the ring. In several persons over thirty, with ruptures of the size of a walnut, he saw them disappear in one to one and a half years under the use of these pads, a result he had never obtained with the hard pads. This form of pad is also applicable in umbilical hernia and in movable kidney.

TREATMENT OF CARDIAC AND VASCULAR NEUROSES.

Dr. Determann (*Sammlung Klinischer Vortræge*, Nos. 96, 97) has observed in two years 54 cases of distinct neuroses of the heart and large blood-vessels. Men were chiefly affected, and particularly those whose occupations as merchants, speculators, etc., exposed them to emotional excitement. Anemia was generally present and the general causes those of neurasthenia. Emotions were usually the exciting factors, though it may be a reflex from other affections, as those of the digestive tract, sexual organs, neuralgias and the so called spinal form of neurasthenia. In rare cases a too elevated region may be the cause. Organic symptoms, as murmurs, extension of the heart's dullness and arrhythmia, are quite rare. The pulse-rate may rise upon slight excitement to 96 or 100 a minute, though at the beginning of the attack it may be slowed, especially after fright, with a reaction setting in with increased pulse-rate, changes in the color of the face and hands, paresthesiæ in the hands and feet, precordial anxiety and dyspnœa. In time the second or paralytic stage is reached, where the pulse is continuously high, 96–120, even occasionally at 140 and over, with a weak beat, the vascular tonus decreases, there is paleness and coldness of the peripheral parts, the nutrition suffers and sleeplessness sets in with depression of mind and irritability. Slight bodily exertions, as arising from a chair, turning around suddenly, or sudden emotional impressions, will then provoke an attack. The irritative and paralytic forms may be mixed. Diagnostically, myocarditis and sclerosis of the coronary arteries will offer

some difficulty. A transition of these grave nervous states to actual organic disease he regards as not improbable. The prognosis is not unfavorable with proper treatment and continued attention to hygienic rules. Its course is long and relapses are frequent. Treatment must be chiefly psychic; the causal affection must be kept in mind and removed. The nutrition must be regulated, with plenty of fresh air and exercise. The various preparations of iron and arsenic with valerian are of service, together with hydrotherapeutic measures, electricity, gymnastics, massage of the heart and residence in an elevated region.

CORRESPONDENCE.

INEBRIETY.

EDITOR MEDICAL AND SURGICAL REPORTER—SIR:

In looking over some numbers of THE REPORTER of a year ago, I notice an article from the pen of Dr. Wigginton, of Waukesha, Wis., on this well-worn but still important subject.

"The drink problem of this country is of vast proportions," truly says Dr. Wigginton. "The vice of intemperence certainly demands the best thoughts and efforts and work of philanthropists in this as well as every other country. The misery, the suffering, the degradation, besides the untold and uncounted millions of money, speak for it a more than passing notice."

The one fact, however, that remains through all this, evident to every one, is that all that is necessary to remedy this evil is for men to abstain from the use of intoxicating drinks as a beverage. The arguments the writer uses to prove that inebriety is a disease instead of a vice are specious and have been used again and again by theorists, for it is *not* admitted, even "pretty generally," that inebriety is a disease. The author says inebriety is a disease governed by pathological causes the same as any other disease. He, however, does not mean to say that every man who takes a drink or even one who gets drunk under tempting circumstances is an inebriate.

Where would Dr. Wigginton draw his line of demarcation? I have seen men who could drink a half-gallon or more of whisky every day and still be able to attend to business, while others would get gloriously and even beastly drunk on a half-pint or less. What would the doctor do with these cases? The one man, as I have absolutely known, often would be strai h to all appearanees in the evening after having drunk a half-gallon or more; the other with a "jag" of gigantic proportions on a half-pint.

Dr. Wigginton claims that the causes of this disease are predisposing and direct or exciting, the chiefest of all being heredity. Let us consider this. He admits that a child born of intemperate parents need not of necessity inherit this disease, leaving us to infer that after all inebriety may be a vice. Leaving out sex, nationality, etc., as predisposing causes (for we propose to speak more particularly of heredity), we pass over most of his arguments, for if heredity be a true cause, then all others must be subordinate to it.

The drink habit is admitted to be almost wholly confined to males. How often do we see a man foolish enough to make a beast and worse of himself, of whom some one will say: "Oh, well, no wonder he drinks. His father or grandfather was a drunkard." This man, perhaps an only son, may have a half-dozen or more sisters, not one of whom has inherited this disease. In fact, no matter if the father and grandfather and all ancestors for hundreds of years back had this disease, the girls never inherit it. Oh, no! They may be puny and sick in body; they may and do have sorrows and troubles no man can ever dream of; they may be married to men who have inherited this disease who starve, maltreat and abuse them, but Dr. Wigginton nor any one else ever saw a case of heredity in a woman. It does seem strange that with all the cases of so-called heredity women are "not in it." One would naturally suppose, with her finer nervous organiza-

tion, her numerous diseases, unpleasant and painful beyond anything a man can feel, her greater temptations, with pregnancy, child-birth and the suffering incident thereto, woman would be affected with hereditary inebriety if there be such a thing. But who ever heard of such a thing in woman? In thirty years' practice I never saw or even heard of one case that could even remotely be accredited to heredity. An intemperate woman can always trace her disease to man's lusts, not to heredity; and with her virtue all she has in this life is gone.

When Dr. Wigginton speaks of environment, he strikes the keynote of the cause of ninety-nine out of every hundred cases of inebriety. Few men get drunk alone. Usually, in fact almost universally, men want some boon companions to make merry with them; and a boy or young man invariably, no matter whether his propensity be accredited to heredity or to deviltry, begins his drunken career in company with kindred spirits at a political meeting, Fourth of July celebration or social gathering of some kind. It is a very poor excuse or reason to attribute such cases to heredity. If the boy or young man had had different environments he would have remained sober.

Then, more nonsensical than all else, is the assumption that a man who is a drunkard cannot quit the beastly habit without treatment, let the cause be heredity or environment. He *must* abstain from the use of intoxicating liquor, even if he be treated by Keeley or somebody else. I knew a man who had been a drunkard for more than thirty years, drunk every day in all that time, who quit all at once and without treatment of any kind. This man had a good-paying business, but he drank up all the profits. He, as I said, simply quit drinking. He traveled all the time in connection with his business, accumulated property and was doing well again. He never kept away from places where liquor was sold and drank. He loafed about saloons and bar-rooms, but he never drank a drop. He lost all he had in the terrible Johnstown flood, but he came through and remained unscathed so far as his resolution to remain sober was concerned. Neither heredity, nor environment, nor adversity affected this man. He has solved this problem of inebriety, this disease so called, to his own and to every unbiassed person's satisfaction. This man's whole system had been saturated with the morbific poison arising from the constant use of enormous quantities of whisky, yet he had no trouble to break the chain that bound him.

This man was constantly surrounded by boon companions, men who had the "disease" in its worst forms. He was a jovial, good-natured fellow, a great story-teller, with a big heart and a purse open always to "treat" any one who would drink. Yet to-day he is a sober man and a respected citizen, and that too without any treatment whatever, without religious inclinations of any kind, for unfortunately he is a very profane man. He simply determined to stop this vicious habit and show his legions of friends he was a man and not a brute. I inquired of him whether he was not tempted sometimes to drink. He said he was, but that he was man enough to overcome all temptations, and I believe he is. This case, which I have specified at length, is only one of dozens I could mention in my own neighborhood.

Cannot any man do this? Is it not nonsense to talk of any man's inability to stop a vicious habit without resorting to treatment? Of course no intelligent person will attempt to deny that after years of whisky-drinking and debauchery the system will become diseased. So will it if any other vice is continued for a length of time, but the difference between inebriety and other diseases lies in this fact: No matter whether the disease be epidemic or endemic, the system becomes charged with a certain morbific poison—germs, bacilli, microbes or whatever it is—from without, or at least the poisonous matter enters the system in a manner involuntary to the sick man, whereas in this disease inebriety the patient deliberately takes the poison into his system. He can secure immunity from the disease without inoculation, or he can eliminate it after infection by simply abstaining from the use of intoxicating liquor.

Dr. Wigginton truly says that "to summarize, we might say environment is the exciting cause and covers the whole subject." "Bad associates," he says, among other things is a cause, and I think we need seek no further for the direct and the main cause of drunkenness. Let a boy or young man keep away from evil associates

and he will never get drunk. Oftentimes we see a big strong man, after a business reverse or some trouble, death perhaps in his family or a little domestic misunderstanding with his wife, in which he is usually the aggressor, go off and get drunk and keep on getting drunk until he has this disease Dr. Wigginton discusses so learnedly. Does his wife, too, get drunk on a like provocation? Nay, verily! She bears up under a load of trouble her puling husband could not understand, and keeps her grand womanhood and her virtuous character unsullied. While her husband, with his "heredity" or "environment," is spending his money to get this disease, money his family sorely needs, she, with *her* "heredity" and *her* "environment," is doing right as "God gives her to see the right." Nobody pretends that this "disease," after years of immorality and vice, can be gotten rid of in "three or four weeks." The doctor says because a man suddenly stops getting drunk it is no sign he is cured of inebriety. He is right. But if the man stops and continues to stop he will be cured.

The author's recommendations for the cure of this disease seem to me, while harmless and good enough, to be rather visionary. The *drink habit* is certainly a serious one, and its solution calls for the best thoughts of statesmen and scientists, but it appears to me that the right thing has never been tried. I would not pretend to say what more would be right than to convince men that they wrong their God, their country and themselves by the continuance of this vicious habit. No man can make me believe that one ever lived who *could* not quit the drink habit if he *would*. To teach men that this vice is a disease and giving them a license to revel in debauchery and crime because of heredity and a presumed inability to help themselves is certainly a wrong to morality and to society.

I can remember as a boy in the community in which I live when within a radius of three or four miles there were twice that number of distilleries, and that the exception was to find a really sober man. Now there are but few distilleries in the county, and a habitual drunkard is the exception. Then not a house could be found where whisky was not used as a beverage. Now scarcely any one uses it. The liquor traffic in Pennsylvania is regulated by a wholesome license law which if enforced is almost practically prohibitory, and any one can see the great reformation that has been worked out in the last two or three decades. Science, philanthropy nor anything else can eradicate this evil until it is looked upon as a vice and not a disease.

WM. F. MITCHELL, M.D.

Addison, Pa.

Longevity and Drink.

The British Medical Association has been investigating the question of longevity in connection with the use of alcoholic beverages (*Med. Rec.*). Deaths to the number of 4,234, taken at random, show the average age of temperate drinkers to be sixty-three years; careless drinkers, fifty-nine years; free drinkers, fifty-seven years; intemperate drinkers, fifty-three years; total abstainers, fifty-one years. The analysis in the case of those who reached the age of over eighty shows that 15 per cent. were total abstainers, 10 per cent. heavy drinkers, and 74 per cent. moderate drinkers. Of those who lived more than ninety years, 15 per cent. were total abstainers, 9 per cent. were hard and 75 per cent. moderate drinkers. These figures must be applied with some caution. A certain large proportion of total abstainers are so because of some form of ill-health or natural weakness.

Tubercle Bacilli in Butter.

A Swiss physician introduced butter made from the milk of a tuberculous cow and containing tubercle bacilli into the abdominal cavities of guinea-pigs. The guinea-pigs died of tuberculosis. He then bought butter from various markets and injected five to ten centimeters of it into the abdomens of guinea-pigs. Two out of twenty specimens of butter were found to contain virulent tubercle bacilli.—*Boston Med. and Surg. Jour.*

Men and Women.

Twice as many women as men are afflicted with neuralgia.

Men are more liable to insanity than women, but after becoming insane die sooner.

Phthisis and pneumonia are more frequent and fatal among men than among women, while cancer and apoplexy kill more women than men.—*Med. Age.*

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SATURDAY, JANUARY 5, 1895.

EDITORIAL.

SENSATIONAL NONSENSE NOT SANITARY SCIENCE.

Occasionally medical scientists, by enthusiastically accepting some alluring but specious proposition prematurely, have allowed themselves to be swept into practices unfortunate for their science and disastrous to their patients. The tuberculin treatment for tuberculosis is an illustration of such an error.

Much more common are exhibitions of what may be termed burlesque science—irrational and illogical deductions from established scientific premises. Preventive medicine seems to afford peculiar opportunities for these pantomimic displays. It may be questioned whether medicine eventually is not benefited rather than embarrassed by these performances of science *bouffe*. Certain it is that they who in the name of science commit such folly and seek notoriety as public alarmists, are oblivious to the truth of that homely saying of Abraham Lincoln, "One may be able to fool some people all the time and all people some of the time; but one cannot fool all the people all the time." The public press, which is the agent most frequently employed in circulating these pseudo-scientific dicta, is at the same time the factor most potent in exploiting their fallacies.

Perhaps there is nothing to which an American community is more sensitive, or which receives more the scrutiny of individuals, than those regulations of law or ordinance enforced as special protection against possible or imminent danger to the common health. The public sentiment which supports these regulations is the result of progressive education, and in this development the press is the most important factor. In matters of public health the lay press relies for proper direction upon current medical literature, and is prone to amplify and exaggerate whatever information is there obtained. Hence it behooves medical bodies and medical journals to be circumspect in their utterances and to con-

fine themselves to unadorned facts in their deliverances. The public is not accustomed to discriminate between real medicine and newspaper medicine, and the sayings of medical men or associations delivered to the lay press direct are but cheap biddings for notoriety. Whatever *eclat* is gained is at the unnecessary expense of public alarm.

Of late we have experienced an endemic of calamity howls which would have been regarded jokes but for the sources whence they arose. For instance, the following resolution, recently adopted by a medical society, certainly displays much more of anxiety to attract attention by making a great noise than of good professional knowledge or practical common-sense. The resolution recommends that "the Board of Education abolish the common drinking-cup in the public schools, the Park Commission do away with drinking-cups at springs, and railroad companies remove the common drinking-cups from all stations and trains, to prevent risk of contamination and teach the public to adopt and use individual drinking-cups."

This is a not unfair specimen of the sensational nonsense sometimes offered the public as sanitary science. It is a result of the thoroughly unscientific methods and egregious incompetency of those precocious ones who receive, without comprehending fully, an hypothesis probable in the abstract, and promulgate it as a general law positive in the concrete. There may be some extenuation in the case of our friends whose conception of the supreme spirit of medicine is a diluted Dynamis, and whose scientific faith predicates infinite potency of the infinitesimal. But it is not science in the ordinary acceptation of that much-abused word.

We do not feel called to defend the rust-corrupted tin cup of the public school, nor the galvanized solder ladle at the park fountain, nor the battered leaden antiques which adorn some railroad stations and cars, but these are offenses against public decency rather than menaces to public health. To abolish articles so absolutely essential to public convenience and comfort may be sound theoretically. When reduced to practice, however, factors must be taken into consideration which modify the theorem to such an extent as to render it impracticable. These modifying factors will determine the verdict of the public in its estimate of the utility of the proposition.

That dangers may exist in the water supplied there can be no reasonable doubt. But the resolution does not contemplate dealing with the water. There appears to be no authentic record of the probable transmission of infection by the utensils mentioned *independent* of a contaminated water supply. Nor are we aware of an instance where in the researches of the bacteriological laboratory there has been discovered and identified any infective germs obtained from one of these public drinking-cups. Before advocating a measure which would produce an enormous amount of public inconvenience, discomfort and suffering, it would be well for astute aspirants to popular scientific repute to establish (1) the probabilities of these cups becoming infected in the course of their ordinary use; (2) the probabilities of retaining infection despite the disinfection by constant flushings with water and by exposure to the atmosphere; (3) the probabilities of users becoming infected under the necessary conditions demonstrated by present knowledge of infectious processes. When the risks can be shown to have more than a theoretical existence and a present danger can be urged against undeniable merits, science will be found ready to suggest a rational remedy.

The alternative proposed, viz., the possession and use of individual drinking-cups by each and every human being, is so

manifestly inconvenient and impracticable that we are impelled to advance a suggestion in aid of our scientific friends whose cerebral powers were overstrained before a simple, universal and easily applied specific was devised. Being a novel application of an old principle, perhaps some speculative sanitarian can take out letters patent and find his own reward while benefiting others.

In general terms the apparatus may be described as consisting of a hole of any desired dimensions, surrounded with a casing of any impervious material, rigid of flexible, and fitted with a sterilizer at one end and a sucker at the other. It is needless to specify the innumerable forms in which this principle may be applied, but it is evident the lady of fashion may wear her individual drinking conduit as a jeweled hairpin or as a bracelet; the business man may carry his personal aqueduct in the same pocket with his fountain pen; the dude may secure another function for the sapling he uses as a balancing pole when his hair is mussed, and the urchin will not neglect a utensil which can be utilized as a blow-gun.

Moreover, the Board of Education, the Park Commissioners and the railroad companies could, at a trifling expenditure, provide abundant individual conveniences for the improvident and for the strangers within their gates, by supplying quantities of the wax-paper straws commonly seen at soda fountains and other repositories of uncontaminated liquid refreshments.

Another manifestation of sanitary insanity is a folly which amounts to sacrilege. Even the sacramental cup has been accused of conveying infection. Suffice it to say that the accusation is evidently brought by parties having no personal knowledge of the institution. Throughout all the centuries, while millions have obtained comfort and blessing by partaking of the holy communion, there has never been recorded a single instance of the transmission of infection by the cup of the New Testament. There is absolutely no justification for agitating this matter in our present knowledge.

Apart from these flippant fancies there is abundant food for thought presented in the operations of scientific health precautions under the direct supervision of conscientious and fully qualified sanitary scientists.

There is a risk that what is called scientific medicine may be pushed to the point of scientific fraud and plunder. Public health measures must be not only rational, but humane, or they will fail of support from public sentiment. The advocacy of extreme measures tends to breed indifference rather than rational caution; each unreasonable or too severe health regulation encourages and stimulates the concealment of conditions most dangerous to the community from a health standpoint. In cases of certain contagious diseases a form of quarantine or isolation may be enforced which proves too severe and even oppressive. The rights, family ties and interests should be scrupulously guarded in the enforcement of health regulations. It is not an impossible occurrence, not even an improbable one, that a workingman, one whose family is dependent upon him for support, who has no resources other than his personal labor, may be quarantined, penned in the narrow walls of his home with his poverty, disease and distress, while some loafing ward heeler and political sycophant is liberally paid to guard the doors that bar in its poverty and need. This may happen to many a poor man while the rich and influential walk abroad unhindered. There are no immunities from legal quarantine which the rich should enjoy over the poor.

Our citizens are sufficiently intelligent and alive to the importance of wise health laws and of the value of their efficient local and general administration of the health

of our population to recognize that isolation in many cases of contagion is important, and against it there neither could nor would be complaint. Where this is required of the poor their limited means of subsistence should be carefully considered and destitution guarded against. A humane, scientific and common-sense application of our existing knowledge of the causes of disease as affecting masses of population, this knowledge crystalized into simple health regulations and circulated among rich and poor would distribute knowledge of health conditions and tend to eliminate whatever may be offensive in sanitary administration. To promote public hygiene our sanitary laws must have a wisdom and justice in them appreciable by the masses of population, and their execution must be tempered by a spirit of the highest public good.

There is nothing more offensive to communities than to be brought too rigidly under the ban of law.

Uncleanliness and slovenliness are not habits with our people, therefore our immunity from many filth infections. Yet constant vigilance is required on the part of our health authorities to guard against those nuisances sometimes intentionally, more frequently unintentionally, stored out of sight.

With all the vigilance of our sanitary administration we have not yet reached that ideal cleanliness suggestive of the best hygienic conditions. "The entire number of complaints of nuisances received and entered upon the records was 33,119. This includes complaints received from citizens, nuisances discovered by the house-to-house inspection, nuisances reported by the medical inspectors and those reported by the Bureau of Police."

The annual report of the Board of Health for 1893 made an excellent showing as compared with past years, and we can safely anticipate, from present health conditions, the more efficient dealing with nuisances and rigid exercise by the authorities of sanitary functions, a better report for the current year, 1894. During the year (1893) the death-rate per thousand was 21.20, or one (1) death to each 47.15 living persons. The Board of Health was fully justified by the facts in making in their report the following statements, which have an interest for the medical profession as well as the general public: "It may be said without contradiction that in no period of the history of this country have the maritime defenses against the introduction of dangerous communicable diseases from abroad been so complete, and the organization of sanitary boards and the efficiency of sanitary work been so wide-extended and so thorough. Not only was the strictest attention bestowed upon cleanliness of the public thoroughfares and places, but extraordinary effort was made to get rid of nuisances upon private premises.

"It is sufficient to say that by the united efforts of the authorities and the people the work of purification constantly progressed, leaving as its reward a condition of health which was a marked improvement over many of the preceding years."

When it is considered that the air we breathe is filled with all the detritus that comes from the wear and constant travel over our old cobble-stone street pavements, all will appreciate the strong language of Mayor Stuart in one of his messages: "Liberal appropriation enabled miles of improved paving to be laid in these small streets, and from the standpoint of practical municipal philanthropy in improving the health and surroundings of the people living in these streets, it is, in my judgment, the most important work accomplished during the whole year. The houses there are as a rule very closely built and the residents compelled by their circumstances to remain there during the heated period. Heretofore it was utterly

impossible with the cobble-stone pavements and their defective drainage to keep them clean enough to even approach a sanitary condition, and besides, it was hardly humane to compel our fellow-creatures to live among such municipal surroundings. In my judgment there has been no money so wisely appropriated, and you could appropriate no amount too large for thus improving the small streets in all sections of the city."

Thus it will be seen that there has been a very general carrying out, as far as means were afforded, of sanitary obligations. So the alarm gentlemen, with their little fads or hobbies, can indulge in their small scientific amusement without startling the world by their discovering some new lurking enemy to human health and happiness, and they may find by-avenues to public notice without exciting more than amusement or ridicule.

ABSTRACTS.

NURSING IN ABDOMINAL OPERATIONS.*

MARIE ERNESTINE WELCH, TACOMA, WASH.

Surgical nursing is divided into two great classes: General surgery, which embraces fractures, amputations, burns, etc., and abdominal surgery—the operations on the abdominal or pelvic organs.

For my subject I shall choose nursing in abdominal surgery.

Under this head many different operations can be performed for which a skilled nurse is required—as removal of uterus and appendages; the uterus itself; the ovaries and Fallopian tubes—all or one—cysts, tumors, appendix, portion of the bowels, spleen, etc.

The kidney is removed sometimes, but usually the incision is made on the side—almost under the arm, a trifle toward the back, instead of in the median line.

Operations on the stomach, gall-bladder, pancreas, etc., are also classed under abdominal section.

The uterus and its appendages are sometimes removed through the vagina; but where adhesions are suspected it may be necessary to open the abdomen.

The duties of the nurse in such a case are a matter of great importance.

She must realize the gravity of the case and must be exceedingly careful that no complications arise through any oversight or neglect on *her* part. She must be gentle and kind, cheerful and sympathetic. While she must do all she can to reassure the patient, she must not be too confident of success, nor must she fail in carrying out the *minor* details.

Germs invade almost all, if not all, places. If we render everything aseptic—germ-free—then we are sure, if anything should occur, that it was through no fault of ours.

Sometimes, despite all we may do, our patients die; but it is a source of great satisfaction to know we were blameless.

When operations are to be performed the nurse usually presents herself at the appointed place two days before the time fixed for said operation, and not less than twenty-four hours before the time, in order to make the necessary preparations, etc. First she will see the patient and get a full history of the case for the compiling of the chart; take temperature, respiration, pulse and examine the stools and urine carefully. Her data must be exact, and if she notices anything to lead her to suspect kidney trouble, she must immediately inform the physician.

The safest and wisest plan is to send a specimen of the urine and have it analyzed before the operation is done.

The heart and lungs of the patient should also be thoroughly examined before the anæsthetic is administered; and should the physician overlook this in his preoccupation, it is the nurse's duty to call his attention to it.

The preparation of the patient I shall first consider. The physician or surgeon

*From Trained Nurse, October, 1894.

will give the nurse certain directions, which must be carried out *to the letter* and will read something like this: Bathe patient antiseptically; shave the mons veneris and vulva; give vaginal douche and enemas enough to empty the bowels. (A mild purgative also will sometimes be ordered.) Place bichloride pad 1:200 over the field of operation for twenty-four hours preceding operation. Give no food for at least six hours before the operation, etc.

The mons veneris and vulva should be shaved the evening before the operation, and a thorough bath given. Scrub the parts to be operated on and the neighboring vicinity with soap and water applied with a new brush. Next, bathe these parts with ether or alcohol and over them place the pad—a piece of antiseptic gauze wrung out of bichloride solution 1:200. The pad must be large enough to entirely cover the whole abdomen, from the sternum to the pubes bone.

The hair should also be thoroughly washed and dried. The patient is then given the purgative, if one has been ordered, and she is then left to sleep. The next morning, early, the enemas are given. These may be plain warm water, soapsuds, warm water with an ounce of glycerine, or just an ounce of glycerine with enough water added to permit its passage through the syringe. This sort of enema is generally followed by plain warm water after a little time has elapsed.

The vaginal douche is then given, after which the patient rests for a short time, while the nurse proceeds with some preparations in the operating-room. About two hours and a half before the operation the nurse will give the antiseptic bath in sterilized water placed in a sterilized bath-tub. Prepare seat of operation the same as before, by bathing off with alcohol or ether and reapplying new pad. This pad must not be removed until the patient is on the table and the surgeon directs its removal.

One hour before the operation the last enema and douche should be given, and the patient is then put into a sterilized bed, after having been dressed and her hair neatly and tightly braided *à la* Marguerite, where she is to remain until ready for anæsthetization. Just before the anæsthetic is administered the nurse should catheterize her and remove false teeth.

The clothing of the patient consists of an undervest, a pair of leggings made of muslin and a short flannel sack or night-dress. The leggings must reach to the hips. These are very nice, as they protect the limbs from cold and exposure. All the clothing of the patient, beds, operating-table, sheets, towels, nurse's clothes, etc., must have been thoroughly sterilized.

A sterilized blanket must be ready to cover the patient, covered by sterilized sheets.

Having now completed the preparations for the patient, we will consider the nurse. She must go to the case in as perfectly a sterilized condition as it is possible to attain, having taken an antiseptic bath, hair having been thoroughly cleansed and all her clothing aseptic.

She should take with her a cook-book, a clinical, room and water thermometer, bed-pan, catheters—glass and soft rubber No. 7—a rectal tube, fountain syringe, ice-cap, hot-water bag, Wilson charts, dressing-pans, two—one for solution, the other for soiled dressings—bichloride tablets 7½ grains, carbolic acid 95 per cent., graduating glass—large—etc.

She must never enter the room in which the operation is to be without she is in a perfectly aseptic condition. She must take especial care of her nails, for they often contain septic material which might be transmitted to the patient.

She must always present a neat, clean appearance and her linen should be immaculate.

We have now reached the stage for preparing the room for the operation. This should have been cleaned and all furniture, carpets, draperies, etc., removed. The room should then be closed, door locked, but before so doing the windows must be thrown wide open, so that plenty of fresh air may fill the room.

It should be left this way for at least from twenty-four to forty-eight hours before preparing the room for the operation.

In selecting the room, be sure of several things. First, that no contagious disease has been in the room at any time. If there has been, it must first be thoroughly disinfected by sulphur. Second, the room must be very light, with abundant ventilation and means of heating if necessary. A room with a southern exposure is considered the best.

The furniture of the room will consist of the following articles: Three small tables, one each for sponges, for dressings and for instruments. A long narrow table is required for the operation, and over this the surgeon sometimes places a frame —to represent a laparotomy table—and by raising this he can put his patient in the Trendelenburg position, lowering the head and raising the knees. By this method the intestines are forced toward the diaphragm and are out of the surgeon's way in operating. A chair, a bench or a table is needed on which solutions can be placed ready for use. The bed for the patient, if she is to occupy this room after the operation is over, must be placed where it will be out of the way during the operation. Besides what has been already mentioned, there must be a wash-stand (with towels for surgeon and assistants to sterilize their hands) and a stool on which a basin containing sterilized water must be placed for surgeon's hands during operation.

These articles, after having been thoroughly cleansed, are brought into the operating-room. The nurse will then proceed to wipe floor, ceiling, walls and every article of clothing with a cloth wrung out of bichloride solution 1:1,000. Each time she leaves the room she will fasten the door so no one can enter.

All china, glass, in fact everything used must be sterilized; therefore boil said articles. Turn bowls, etc., upside down and cover then until ready for use. Two wash-bowls and pitchers are needed —one bowl for surgeon's hands and the other for his assistants. One pitcher will contain boiling water and the other cold sterilized water. If permanganate of potash is used, have some oxalic acid on hand to use for removing the traces of the permanganate.

Three basins should be within easy reach—one for washing sponges if sponges are used, one for the bichloride solution and a third for the sterilized water. The sponges are passed to the assistant after coming out of the sterilized water.

Have a small gasoline stove on hand with pan of hot water ready, so that if any instrument needs sterilizing it can be done at once. Two instrument pans, also one for needles, sutures, etc., are necessary, and an irrigator which will hold not less than one gallon of solution or sterilized water.

A perineal pad is nice, with the long flap dropped in a bucket to carry off the water, discharges, etc.

Have a good-sized foot bath tub and a couple of slop-jars to empty the soiled water in.

Four dozen towels are usually required, and five sheets will be needed. It is best, however, to have two or three extra ones on hand.

One dozen towels should be ready to be dropped into bichloride solution.

Be sure all the linen has been rendered aseptic.

Now, as to the solutions and smaller articles. Have plenty of water.

The day before the operation the nurse should prepare that which is to be used cold. *Boil* it for one hour, then strain three times through sterilized cloth into sterilized receptacles, and when this is done cover and tie cover down. Do not remove until the water is required for the operation. About five gallons of cold sterilized water will be needed and four gallons of boiling water, which must also be strained.

If solutions are ordered get them ready, label them and color all poisonous solutions. Keep them covered. In fact, cover everything of this kind.

Have soap-dish, Castile soap, two or three small, new nail-brushes, and be sure a thermometer is in the room. The temperature must not be below 80° nor above 90° F. A warm room is necessary on account of shock. Have plenty of hot-water bottles ready for use.

A small tray should be prepared, having on it a hypodermic syringe, nitro-glycerine and strychnine tablets, brandy and distilled water. This tray must be placed so that it can be used at a moment's notice. Just before the patient is anæsthetized the nurse may be directed to give her—hypodermically—grs. ¼ morphia, atropia 1:200 or a drachm of brandy.

About three nurses are required at the operation. Sometimes a fourth one is asked for. One is needed for the instruments, another for the sponges and a third to wait on the physicians and nurses.

Three physicians are usually present, the operator, his assistant and the anæsthetizer. It is better for the nurse in charge of the case to assume charge of the

room and let one of her assistants pass the instruments, for she can then be on the watch constantly to supply anything that may be required.

As she has been there for several hours, she will best understand where things are. Each nurse will pay strict attention to her own part of the work, and if this is observed there will be no confusion.

The nurse who passes the instruments must not touch anything else. She must be surgically clean.

The surgeon will be too much occupied to notice everything, so the nurses must be extremely careful not to touch door-knobs, etc. If it is necessary to do so, the hands must be sterilized immediately.

The patient is usually anæsthetized in bed, in another room. One nurse and the anæsthetizer will remain with her; the other two will complete the work in the operating-room and wait on the physician.

When everything is ready and the patient is unconscious, she is carried to the table, which has been covered tightly with a blanket and a sheet, said articles being separated by a piece of mackintosh. Over this is placed the perineal pad. The table is placed near the window with the feet of the patient toward the light. If, however, Trendelenburg's position is desired, the head should be toward the window. The operator, the nurse in charge of the instruments and the instrument table are on the right side, the assistant physician, sponge table and the nurse in charge of this table stand on the left side.

The anæsthetizer's place is at the head of the patient. He must be supplied with pins, basin and towels, in case the patient should vomit.

The instruments are usually sent in an hour before the operation, and consist of the following: 12 prs. hæm. forceps, 4 prs. scissors, 4 retractors, 2 prs. dressing forceps, 1 pr. volcellum forceps, clamp for broad ligament, 1 groove director, 1 sequestrum, 2 aneurism needles (straight), 1 scalpel, 1 bistoury, needles, silk and catgut sutures, aspirator and drainage tube. A list must be made of the instruments. These must be boiled for twenty minutes, then lifted out with small pair of forceps and placed in the trays prepared for them, in either carbolized water, alcohol, pure or sterilized water. The blades of the scalpels, bistouries or those with sharp surfaces must be wrapped with cotton before they are boiled.

The needles can be put through a piece of gauze and boiled in this way. Silk ligatures and sutures are also boiled. Catgut, however, remains in alcohol.

After the patient is placed on the table the nurse will uncover the abdomen, removing everything but the pad.

The leggings must be pushed out of the way and the undervest and night-dress drawn up. The arms are folded across the chest and the sleeves pinned to the gown. The nurse then covers the limbs of the patient with a blanket wrapped in sterilized sheets.

The operator then removes the pad.

He may wish to have the parts rescrubbed; if so the nurse brings to him a basin containing water, also soap and brush. Should the nurse be directed to perform this part of the work, it must be done thoroughly, wiping off with bichloride solution 1:2,000. Over the abdomen place a piece of oiled silk with a hole cut in the center. This piece should be large enough to reach from the chest to the knees and from one side of the table to the other; then bring the bichloride towels. Wring them out of the 1:2,000 solution and cover the oiled silk with them. The opening in the oiled silk must be large enough to permit of the surgeon having plenty of room to work. This is very nice, as it protects the patient from the dampness and water. The surgeon then commences work. The head nurse must be ready to pass the bichloride towels when they are needed, to keep the irrigator filled with water of the proper temperature, about 100° F., and to change water in the sponge dishes, and, in fact, to carry out any orders.

The first nurse manages the instrument table, thread, needles, etc. The nurse in charge of the sponges must count every sponge and write down the number in use. Every one *must* be accounted for, because if one were left it would cause serious trouble, if not death.

Before the abdomen is stitched she must see that every sponge is in her basin. The first nurse must use the same care in regard to the instruments.

If any parts are to be amputated the nurse in charge of the room will pass a

tray with a towel on it to receive them, and after covering them they will be placed to one side. While the surgeon is closing the wound the nurse will get the dressings for him.

These are always prepared before the operation, wrapped in a towel, to be ready when called for.

These usually consist of a large piece of iodoform or bichloride gauze, some antiseptic powder, combine pads, some absorbent cotton to place over the pads and a many-tailed bandage. After the dressings are all on you can relax your vigilance (to a certain extent) in regard to germs.

The patient is then put in bed on her back with one low pillow, a towel under her head, and a basin and towels ready for emesis. The instruments are scrubbed and scalded, and all the *débris* and unnecessary furniture removed from the room.

The patient must be watched very carefully. Shock may occur; if so, give some slight stimulant and surround her with hot bottles.

Everything must be done to increase the circulation, but if hemorrhage occurs, withdraw the stimulants and place ice on the head. Remove the bottles, too, if they are around the patient.

In either case the first duty of the nurse is to send for the physician.

As soon as the patient's condition is normal after shock, remove the heat and discontinue the stimulants, as you may have the other extreme, fever, if you are not very careful.

Nurse's duties after operation are comparatively light, as all her work is done at the time of the operation.

The patient always gets along well, if her condition is favorable, when all the preparations have been thorough. She needs careful watching for several days and proper nourishment as well. The nurse may be obliged to catheterize her, and also give enemas when the bowels are to be first moved. If the patient be troubled with tympanites, the rectal tube, if introduced, will afford instant relief. Patients, as a rule, will ask for them a second time. They can be left in the rectum for fifteen or thirty minutes several times a day.

It is necessary to keep the patient quiet. If she has to be moved it must be done very carefully or there is danger of straining the stitches, which may cause them to tear out, besides giving the patient much pain.

The bed should have been so arranged as to permit changes being made without annoying the patient. Everything must be done to make her as comfortable as possible.

She will appreciate these efforts exerted in her behalf, and while at first she may be too sick to say much, she will soon be able to talk, and her first words will be t thank the nurse for her kindness.

No impatience should ever be shown with a patient, for unless one has undergone the same operation she cannot realize how much suffering has to be endured at such times, and when convalescing she will be only too willing to ask pardon for having been so irritable, if such has been the case.

A nurse should conduct herself in such a manner that she will reflect credit on her school and be an honor to her profession.

He chart must be carefully and neatly kept, food elegantly served, and she should have a note-book at hand in which to enter full notes of her case.

For the first three days the temperature should be taken every four hours; for one week, every six hours; then if the patient is getting along well, twice a day will be sufficient.

The urine must be watched and defecations as well, and their condition reported on the chart, in the note-book and to the physician.

The sick-room must be kept spotless.

The temperature of the room should be kept at about 68° to 70° F. and be thoroughly ventilated.

All sick-room utensils must be kept in another room. The medicines, etc., if kept in the room, must be covered with a napkin. Food must not stand in the room, but must be removed as soon as the patient has taken as much of it as she desires.

When the wound is to be dressed, everything must be in readiness for the physician when he comes, as he should not be kept waiting.

Care must be taken that everything is aseptic. If the abdomen has been closed the dressings well be slight, but if drainage has been used, careful handling will be required for several days.

Finally, all that is done do well.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

New Sign of Lead-Poisoning.

In eighteen out of twenty persons affected with lead-poisoning M. E. Destree (*Jour. de Med. de Bruxelles*) has observed a narrow zone of hyperesthesia at the level of the articulation of the manubrium with the ensiform cartilage. As a general rule, pressure on the sternum is readily painful only under one or two conditions—namely, when the bone is diseased, as is the case in leucocythemia with lesions of the bone-marrow, or when the thoracic wall and the skin are hyperesthetic, as happens in hysteria, sometimes in neurasthenia, and often in chronic alcoholism. But in these latter cases the hyperesthesia is not found to be so limited in extent as it is in lead-poisoning. Saturnine hyperesthesia is indeed a symptom of nervous origin, comparable to the intercostal neuralgias observed by Rosenthal. "There is nothing astonishing," says the author, "in the fact that the sternal hyperesthesia is so precisely marked, when we remember that Beau has shown that there is never any anesthesia at the level of the scrobiculus cordis in lead-poisoning, and that in lead colic there is a very decided hyperesthesia of the abdominal wall."

A Case of a Child Crying in Utero.

I desire to give a brief report of a case of the crying of a child *in utero*, in so far as I am able to ascertain a rather rare occurrence in obstetrical practice.

On May 16, 1894, I was associated with Dr. Wemple, of this city, in a case of confinement in South San Francisco. The mother had been in labor for some hours, the cervix was well dilated and the breech presenting. The natural forces seemed insufficient to effect delivery, and it was decided to perform extraction. Accordingly the mother was anesthetized, the hand introduced and the foot brought down.

As soon as the foot appeared at the vulva the cry of a child was distinctly heard by all present. The sound was somewhat muffled and seemed as though it came from under the bed. The cry was repeated a number of times, but ceased as soon as the head engaged in the superior strait.

Delivery was effected as rapidly as was consistent with safety to mother and child. The latter was born asphyxiated, but soon revived, breathed and cried again. There was no evidence of liquor amnii or mucus having been drawn into the air-passages. The child is now alive and well.

The explanation of this phenomenon is simple enough, for in the operation of bringing down the foot air entered the uterus and the child breathed and was so enabled to utter the cries.

In my limited researches on this subject I have been able to find but few such cases reported in medical literature. On February 6, 1894, Dr. Grandin reported a somewhat similar case to the Obstetrical Society of New York. In that case version was performed, but in all other respects the case was similar to the one just reported. In the discussion that followed, four other members each reported a case, and an important feature in these four cases was that in two the child perished during delivery. Dr. Grandin's case, with the discussion, may be found in the April number of the *New York Journal of Gynecology and Obstetrics*.

Another case of this kind was published in May, 1877, in the *Medical Press and Circular*. In this case the vertex presented and the forceps was applied. It is stated that the crying continued until the head was outside the vulva, which seems to me somewhat remarkable, as I scarcely see how the child could cry while the head was passing through the pelvis.

In a medico-legal way this subject may be of some importance, since the fact that a child has breathed, when proved by post-mortem examination of the lungs, is considered proof positive that it had an independent extra-uterine existence. In the two cases that died during delivery this would certainly be an error, for had the lungs been examined evidence of respiration would have been found, and yet both were born dead.—*San Francisco Med. Jour.*

Formulæ for the Antiseptic Treatment of Boils and Carbuncles.

Chloroform	ʒ j
Essence of cloves	m 75-ʒv
Creosote	m xv-xxx
Camphorated oil	ʒ ij

M. For external use only.

Salicylate of mercury	gr. ij-v
Salicylic acid	gr. xv-xxx
Rectified spirit	ʒ ss-j
Distilled water	ad. ʒ iv

M. For external use only.

The affected part is covered with compresses saturated with either of the above antiseptic mixtures. At the same time one or the other of the following solutions is injected into the boil or carbuncle:

Carbolic acid	gr. j-iij
Salicylate of sodium, Borax āā	gr. xv
Glycerine	m xxx
Chloroform water	ʒ ij

F. S. A.

Iodoform	gr. v-viij
Salol	gr. viij-xv
Carbolic acid	gr. iss
Ether	ʒ ss-j
Rectified spirit	ʒ iss-ij

F. S. A.

This treatment is said to give excellent results and to do away with the necessity for a more radical surgical intervention even in cases of carbuncle.—*Dr. E. Gourine in Med. Week.*

Salicylate of Sodium in Headache.

In the February number of the *Practitioner* Lauder Brunton writes an interesting article on headaches, in the course of which he points out that the one very common form of headache commences in this way: The patient sometimes feels a little unwonted irritability at night, but this irritability is not always present. It is very often the precursor of a headache. He wakes in the morning about four, five or six with a feeling of weight in the head, but not a headache. He is very drowsy, disinclined to rise, and is apt to turn over and go to sleep again at once. If he does this he awakes again about seven or eight with a distinct but not a severe headache, usually frontal or temporal. As the day goes on the headache becomes worse and worse, until in the afternoon or evening it becomes almost unbearable. It then finishes up with sickness, after which the patient becomes easier, but feels much exhausted. A headache of this sort may frequently be prevented by the patient taking a mixture of bromide of potassium and salicylate of sodium over night, or by getting up and taking it when he awakes with a heaviness in the early morning, instead of turning over and going to sleep again.—*Northwestern Lancet.*

Potassium Permanganate, the New Antidote to Morphine.

Dr. Graham Chambers (*Canadian Practitioner*) says:

Potassium permanganate in dilute solution, not stronger than one grain to an ounce, may be given by the stomach without danger.

Potassium permanganate, subcutaneously, is poisonous.

Potassium permanganate, grain for grain, completely decomposes morphine, the decomposition occurring in acid media more rapidly than in a neutral medium.

Foodstuffs and acetic acid do not interfere with the decomposition.

Potassium permanganate is an efficient antidote if taken while the morphine is in the stomach.

The question still remains as to whether potassium permanganate is of therapeutic use after the morphine is absorbed into the system. It has been proved conclusively that if morphine is introduced subcutaneously into the system it is excreted into the stomach. Now, the morphine passes from the blood into the stomach by osmosis and by excretion, and, by the principle of osmosis, more morphine will be excreted if it is decomposed as soon as it passes into the stomach. Reasoning on this principle, we would expect that repeated small doses of potassium permanganate by the stomach would be of use in cases where the morphine has been absorbed into the system. This is rendered more probable by the fact that morphine, as a rule, is a slow-acting poison.

The Properties of a True Antipyretic.

B. W. Richardson (*Asclepiad*) says the substance to be used medicinally for the purpose of reducing temperature must have three qualities: (1) It must be antiseptic; (2) it must be volatile; (3) it must have the slightest solubility in blood. If it be not antiseptic it is negative in its action as a suppressor of heat. If it be not volatile it accumulates in the blood and tissues, acts then as a foreign body toxic in its nature, and itself causes secondary symptoms which are mischievous and unnecessary, taxing active eliminative organs, like the kidneys, to an undue degree. If it be very soluble in the blood and in the fluids of the tissues, it is the more objectionable on account of its fixation and slow elimination. The value of ammonia as a medicine rests largely on its possession of the three qualities that have been enumerated. It is a splendid antiseptic and it is volatile, but it is too soluble and too powerful a solvent. Given in sufficient doses to check the animal fire, it dissolves the red corpuscles, prevents the free absorption of oxygen from that effect, and by its presence in the blood also tends to prevent oxidation. Chloroform is a splendid antiseptic; it is volatile and, feebly soluble in blood, it does not produce any fixed toxic symptoms nor tax the eliminatory organs unless it be pushed to anæsthesia. The author has used it for over forty years as an antipyretic, and with much satisfaction, but the difficulties of its correct administration have stood much in the way. Hydrate of chloral is more manageable. It is an antiseptic; it turns into chloroform and sodium formate in the body, so that it is both volatile and eliminative, and unless it is pushed too far it is not toxic. In his first observations made on it, immediately after Liebreich's discovery of its narcotic effects, Richardson discovered its remarkable power of reducing animal temperature, and pointed out that when it kills by a large dose the mode of death is by reduction of the body temperature. Since then he has employed it regularly as an antipyretic, and the results he has witnessed from its use surpass all others. "It is without doubt," concludes the author, "when correctly administered, an admirable remedy for pyrexia, and in enteric fever it is, I believe, the best."—*Brit. Med. Jour.*

Vaccination.

Before the introduction of vaccination the mortality in Austria from small pox was 62 per 100,000; in Prussia, 49. Since the introduction of vaccination the mortality has been 2 cases in 700,000. In Germany were revaccination is compulsory, the death-rate is 1 patient in every 1,200,000.

Rest in Heart Affections.

Lauder Brunton, the eminent English therapeutist, recommends absolute rest in cases of advanced mitral disease. Rest enables the circulation to recover its balance, the excessive accumulation of blood in the veins giving place to the proper distribution of the blood between the brain and the arteries; the dropsical effusion and general venous engorgement of the various organs, including the viscera, thus disappears. The change from absolute rest in a horizontal position to the vertical position, with gentle exercise, must be very gradual indeed. Massage and manual Swedish movements are of the greatest value in making the transition, and also in aiding the re-establishment of the normal circulation. The timely enforcement of rest in cases of this sort may save the beginning of the valvular malady of the heart, and thus by judicious management restore the patient to a condition of comparative health and comfort. We have found hot and cold sponging of the surface of the body of great value in the restoration of the normal balance of the circulation.

Dr. Brunton very properly calls attention to the danger of enforcing the rest cure too vigorously in cases of anæmic girls who, by too prolonged rest, are likely to fall into a state of exhaustion in which the heart will receive greater injury than from gentle exercise.—*Mod. Med.*

Early Diagnosis of Phthisis.

Bernheim, of Paris, presented at the congress at Rome (*Bull. Med.*) a paper in which he called attention to the importance of examination of the spleen and the lymphatic glands in cases of suspected tuberculosis. According to this observer, the spleen is always enlarged in cases of tuberculosis, even in the early stages of the disease. This is a new diagnostic point in tuberculosis, and one which should be carefully studied. As a bacteriological test it is exceedingly valuable in advanced cases, and is also applicable when the disease is in an incipient stage.—*Mod. Med.*

Digestibility of Sterilized Milk.

Bendix (*Jahrbuch fur Kinderheilkunde*, Vol. xxxviii, Part iv) has made researches upon sound and sick children as to the digestibility of both sterilized and non-sterilized milk. He concludes:

1. That in healthy children there is no difference as to the digestibility of the two milks.

2. In sick children the sterilized is digested just as well as the unsterilized, notwithstanding the fact that the absorption of fat and nitrogen is so much reduced in such children.

3. The taste and smell of milk, while they may be changed by sterilization, are not materially so, and sterilized milk is readily taken by children.

4. He has never seen the health of children badly affected by the use of sterilized milk. On the other hand, they eat well, grow, and their stools are normal, and they never have vomiting.

5. The transmission of severe diseases from animals to men is prevented by the sterilization of milk.

6. Sterilization is much preferable to Pasteurization, and heating the milk to 212° F., while it does not hinder its digestion, absolutely kills all bacteria and spores.

Periods of Isolation for Contagious Diseases of Childhood.

In the course of a report on this subject Olliver (*Gaz. Med. de Strasburg*) makes the following rules:

For scarlatina, variola, varioloid and diphtheria, the period of isolation, before the child is allowed to return to school, should be forty days, counting from the first day of invasion.

For measles and varicella, sixteen days will be sufficient.

For pertussis, isolation should be prolonged to three weeks after complete cessation of the characteristic kinks.

For mumps, ten days after the disappearance of the local symptoms.

Nasal, buccal and pharyngeal irrigations with antiseptic solutions should be employed, and soap bath and rubbing of the entire surface and scalp should be a necessary preparation before returning to school.—*Amer. Jour. of the Med. Sci.*

Pilocarpin in Diphtheria.

At the seventh general meeting of Polish physicians and naturalists at Lvov, Dr. Kowalski read a paper (*Medycyna*) wherein he recommends pilocarpin as the best remedy for diphtheria (which method he applied in 132 cases during the last fourteen years). The following formula is used by the author:

Pilocarpin muriatic.....	0.09 gram
Brandy.....	20 grams
Aquæ..	60 grams

M. D. S. A teaspoonful every two hours.

As adjuvants he prescribes: *a*, inhalations of a from 0.1 to 0.15 per mille solution of corrosive sublimate, to repeat every two or three hours; *b*, painting the throat with a 5 per cent. solution of carbolic acid, to repeat as frequently; *c*, wine in largish quantities; *d*, strengthening dietary.

Dr. Kowalski feels inclined to attribute the beneficial effects of pilocarpin to its inducing leucocytosis in diphtherial patients, which hypothesis seems to find some support in the results of the following experiments: He took eight healthy white rabbits (of equal weight) and inoculated them with equal amount (five divisions of a Pravaz syringeful) of pure glycerine broth culture of diphtheria microbes, after which four of the animals received each a hypodermic injection of 0.003 gram of hydrochlorate of pilocarpin, while the other four remained without the injection. It proved that in the former group there developed a distinct leucocytosis (from 12,000 to 20,000 leucocytes to 1 cub. mille of

blood), while in the control animals the proportion did not show any deviation from the standard.—*St. Louis Med. and Surg. Journal.*

Treatment of Insomnia.

The multiplication of sleep-producing drugs shows that the manufacturing pharmacists are trying to supply a demand made by physicians and a high-strung public. It is so much easier to give or take some pleasant hypnotic than it is to use natural methods that the latter course has been very much neglected.

At the Cumberland meeting of the State Society, Dr. E. N. Brush advocated the use of the common-sense methods and opposed the use of these drugs. Physical and nervous exhaustion are too common among the American people, and too many have learned or have been taught that such drugs as produce sleep are harmless, and resort to them without the physician's advice and too often with his advice. In the place of these Dr. Brush advocated attention to the skin, massage, baths and the use of easily digestible and nourishing food.

One method of producing sleep and quieting excitement which was not mentioned was the modern novel. Diversion is the principle of many forms of treatment, and if by a good, harmless, but interesting novel the attention can be distracted, the good is incalculable. Those who do not feel like reading may have a good reader, which at the present day is scarce enough. Indeed, in some forms of illness a good story-teller is a very good prescription. As Dr. Brush has said, natural methods are too often neglected. This is because they are sometimes more trouble than the mere swallowing of some small dose, or they are so simple that the patient can understand them. Familiarity belittles almost anything, and advice without a prescription in the present day is too often considered worthless by those who love to be dosed. Some humorous writer has collected the numerous remedies recommended by friends and others for sleeplessness, and they are varied and contradictory.

These natural methods are important and should never be neglected, even if some harmless prescription or placebo has to be given at the same time.—*Maryland Med. Jour.*

Papain for Tapeworm.

Roberts Bartholow (*Med. News*) reports a case in which, after failure of the usual remedies for tapeworm, a parasite twenty-five feet in length became dislodged and was passed after the use of papain, in ten-grain doses, three times a day after meals. The worm had not undergone solution, but Bartholow thinks the drug had exerted a toxic influence upon it.

Use and Misuse of Bicarbonate of Soda.

Dr. Rosenbach (*Cent. f. d. Med.*) claims that the bicarbonate of soda is prescribed by far too often to neutralize excess of acid in the stomach. It is, except in extreme cases, difficult to determine whether the excess of acid is abnormal. To determine whether the excess of acid is the real cause of stomachic disturbances, a careful consideration of the patient's occupation, his general condition, feces, nutrition, the consistence of the stool, etc., is necessary. In too rapid eating there is prone to be a faulty relation of motor functionability and production of acid. Formation of organic acids—fatty or lactic acid—may be a cause. Thirdly and most frequently, the dyspepsia is due to pure hyperesthesia of the organ. On account of its sedative action the bicarbonate is often misused and in too large doses; not more than a good-sized pinch should be taken at one time. Frequently a piece of dry bread or biscuit will suffice to absorb the excessive acid.

Phenacetine for Enuresis.

Holladay (*Va. Med. Monthly*) has found this drug excellent in cases of enuresis in children, five grains at bedtime, and in the troublesome, too frequent micturition where there is enlarged prostate, especially where cystitis is present, the urine being made acid. In such cases he gives a large dose, as much as twenty grains, at bedtime, with the happy result that the patient sleeps better and does not have to arise so often during the night. He has never had any bad effects that could be ascribed to the drug, and thinks, from all the reports of it that are noticed and from his own experience, that it is the safest of the coal-tar antifebrifuge products that are at present in use.

For Continued Syphilis.

Dr. Joseph Jones (*Louisville Med. Monthly*) gives the following formula:

Red iodide of mercury	grs. iv
Iodide of potassium	ʒ iv
Tincture of iodine	ʒ ij
Distilled water	q. s. ad ʒ viij

Sig.: A teaspoonful in a wineglass of water three times a day, one hour after each meal.

Cascara in Rheumatism.

In the *Louisville Medical Monthly* Dr. Cannon reports sixteen cases of rheumatism treated by fluid cascara sagrada aromatic in teaspoonful doses every three hours until the bowels moved freely, then fifteen drops every two hours. All recovered in a few days, and he declares: "Any one who tries this remedy in rheumatism cannot help but be satisfied with the quick results obtained."

Old Age and the Death-Rate.

Only 906 persons in a million die from senility, while 1,200 succumb to gout, 18,400 to measles, 27,000 to apoplexy, 7,000 to erysipelas, 7,500 to consumption, 48,000 to scarlet fever, 25,000 to whooping-cough, 30,000 to typhoid and typhus and 7,000 to rheumatism. The averages vary according to locality, but these are deemed pretty accurate as regards the population of the globe as a whole.—*Med. Age.*

SURGERY.

The Janet Method in Urethritis.

The pathogenesis of the gonococcus has been fully established, but as yet all specific remedies recommended for gonorrhœa have proved futile. The best treatment now, as before, is the prophylactic. Ricord's observation, "Une chaude pisse commence, Dieu le sait, quand elle finira," is equally applicable at the present day, notwithstanding the progress made in the pathology of gonorrhœa. At the genito-urinary clinic of Posner a routine treatment for gonorrhœa is the Janet method, which consists of irrigating the anterior urethra (in anterior urethritis) with many liters of a solution of permanganate of potash (1:100). The strength of the solution is gradually increased until a strength of 1 to 1,000 is reached. The solution is preferably warmed before being introduced. A simple contrivance enables the solution to escape continually after it has fully passed through the course of the anterior urethra. In the beginning it is advisable to irrigate twice daily, and as the strength of the solution is increased, once daily is considered sufficient. Janet's has yielded the better results at this clinic than all other methods of treatment. In urethritis posterior a catheter is carried beyond the compressor urethræ, so that the solution may reach the posterior urethra.—*Occidental Med. Times.*

Deaths from Cycling.

In a recent session of the Paris Academy of Medicine, Petit reported three deaths occurring suddenly during the use of the bicycle. The first case was that of a man sixty-five years of age who had begun to ride four weeks previously. He died in the arms of his teacher as he was about to get off his wheel. The second case was that of a physician, aged forty-eight years, who for the sake of reducing a corpulence which had come on after typhoid fever took to cycling. Without previously having complained of heart symptoms he was one day, while on his wheel, suddenly taken with dyspnœa and a severe pain in the heart region. He stopped, sat down on a bench and died in a few moments. The third case was that of an athlete, aged forty years, who died suddenly on the street while cycling.—*Deutsche med. Woch.*

Technique of Making Urethral Injections.

Guiard (*Annales des Maladies des Organes Genito-Urinaire*) gives the results of his investigations concerning the urethra and its medication. The capacity of the urethra had been stated by Jarnin and Leprevoct to be from 5 to 8 grams, therefore it was held that a urethral syringe should not hold more than 5 or 6 grams, equal to about 1½ drams. Later it was shown that posterior urethritis, particularly late in the disease, was far more frequent than formerly supposed. The author by experimenting on the living subject found that the urethra would always hold 8 to 10 grams (2 to 2½ fluid drams), and more often 12 to 15 grams, and sometimes 16 to 17. As the patient could tell when the sphincter was forced, this was avoided. These deep injections are only called for when definite symptoms have already demonstrated that the posterior region of the urethra is already affected.

In order to administer these deep injections, the author uses a syringe of 20 grams (5 drams) capacity. When it is desired to overcome the sphincter gentle pressure is made, when the liquid will enter. In an experience of ten years he has never had any accidents, and only encountered one case in which the sphincter would not relax. It is better to give the injections when the patient is lying down than when he is standing up. The requirements of an effective injection is that it shall reach all the diseased parts. To do this a syringe of 20 grams (5 fluid drams) capacity should be used, and the injection of its entire contents, if carefully done, is easy and causes no inconvenience.

BACTERIOLOGY.

Green Pus and the Bacillus Pyocyaneus.

Schimmelbusch (*Cent. f. Gyn.*) writes regarding the pathological significance of green pus and the bacillus pyocyaneus. Green and blue pus is the result of the bacillus pyocyaneus. Through its growth in the secretion of a wound it causes a green coloring matter—pyocyanin—and a characteristic sweetish, musty odor, which may be slight or most offensive. This bacillus produces not only green and blue coloring matter, but also, as may be seen in a single wound, yellow and brown. The richest shade or shades of these four colors may be seen. The amount of irritation produced in a wound depends upon the amount of air present—*i.e.*, oxygen—whether there is a favorable culture medium for the bacillus and the conditions or quality of the bacillus itself. He then answers the interesting question why this bacillus appears in clinics and hospitals and why it always appears in wounds. The wound is not infected through the atmosphere or dressings or by the hands and instruments of the physician, but the bacillus is normally found on the skin as a saprocyte. It has a predilection for particular parts of the body, as the axilla, inguinal regions, anus, etc., and therefore most frequently infects wounds near these parts. Is the bacillus pyocyaneus pathogenic? From experimentation upon animals and as far as observation upon man has gone, this organism is locally and generally virulent, but the virulence depends upon the character of invasion.

The Bacillus.

He that despiseth small things shall fall by little and little.—Loj the bacillus.

The bacillus is paradox itself: it is at one and the same time the weakest, minutest and

yet the mightiest of created beings. Individually he is the sixteen-millionth part of weakness and nothingness; collectively he is the consummation of destructive power. All life succumbs to him. The bacillus was born nobody knows how nor when, but it is evident that he did not "die a-bornin'," nor could he help his birth; but that he was born before man his vegetable origin testifies. He was born educated and needs no training. He labors every part of every second in the day and knows not how to neglect a duty. He is neither Republican, Democrat nor Populist, but a simon-pure nihilist. All things have an end except the bacillus, and he has two ends, and each end makes two more ends; each end and every other part of him is productive. A single bacillus in a single day will have 16,000,000 descendants, and each descendant proceeds with due order and regularity to beget 16,000,000 more, so that 16,000,000 multiplied by 16,000,000 every hour in the day will barely give a commensurate idea of his productive powers. The bacillus in breeding is a good deal like the negro's conception of a mule kicking, that is, "mule don't kick accordin' to no rule;" the bacillus multiplies according to no rule, but that he is the greatest multiplier in the world no man can doubt. Arithmetic don't contain enough numbers to outcount him. His relationship is extensive; he is at the same time father and mother, sister, brother, uncle, aunt, cousins, grandfather and grandmother. It has never been determined whether he is his own mother-in-law or not. He is noble by birth and surroundings, and only lives on highly organized bodies. He feeds upon emperors, czars, kings, princes, even politicians and all living kind. His residence is the grandest product of God; crude substances will not catch him. He requires fresh air at one time, at another not, but always moisture; he stands temperature well, thrives between 86° and 104° F.; but when it comes to cold he can give the famous brass monkey a thousand points and discount him. You may freeze him 200° below zero and he will only hibernate; he is like the grain of corn wrapped up with the body of a mummy for several hundred years, dormant and unproductive—he only needs heat, light and moisture to fill him with active vigor. You can find him only where there is plenty of company; he abhors a desert, detests the open sea, altitude gives him a weak heart, hence he is never found on high mountains. He is found in earth, air and water, and like a good Christian cannot thrive in hades. He is distributed universally, individually and collectively; killed by the sigh of a flea, he himself kills the strongest product of God. He is more destructive to human life than wars, famine, floods, earthquakes, railway trains and threshing-machines multiplied many times over. He is greater than the greatest because he has affected and controlled all generations of animal life; his activity is boundless, his value is known only to God, his capacity for evil has never been computed. One of his species alone (the tubercle bacillus) kills 142,857 persons out of every million dying from all causes, not to mention the hundreds of thousands of deaths produced by his near relatives. For man a word is sufficient, but the bacillus wants the earth; not only man but all animal life is demanded; man's creation was the bacillus' opportunity and he embraced it. He is a rod and comes very near being the chastening rod of God.

He is the idol of death, the boon companion of misery.

He is the mighty, dire remorseless, unceasing and hideous Nemesis of man's ignorance.

Ay, a mighty remorseless curse on man then was hurled—
A hideous horror, killing scourge, Death's enigma to the world.

—*Railway Surgeon.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM DECEMBER 16, 1894, TO DECEMBER 22, 1894.

Leave of absence for one month is granted First Lieutenant A. N. Stark, Assistant Surgeon, to take effect upon his return to Fort Sam Houston, Texas.

Captain James D. Glennan, Assistant Surgeon, is relieved from duty at Fort Sill, Oklahoma Territory, and ordered to Fort Snelling Minnesota, for duty at that post.

Captain Edward R. Morris, Assistant Surgeon, on the arrival of Captain Paul Clendenin, Assistant Surgeon, at Fort Warren, Massachusetts, will be relieved from duty at that post and will report for duty at Fort Spokane, Washington.

PROMOTIONS.

To be Assistant Surgeons with the rank of Captain, after five years' service, in conformity with act of June 23, 1874: First Lieutenant Charles Willcox, Assistant Surgeon, October 29, 1894; First Lieutenant Harlan E. McVay, Assistant Surgeon, October 29, 1894; First Lieutenant Euclid B. Frick, Assistant Surgeon, October 29, 1894.

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ORIGINAL ARTICLES.

VARICES OF THE ŒSOPHAGUS.*

DR. PAUL FRIEDRICH.†

The œsophageal veins are divided into three groups. 1. Those tributary to the superior vena cava by way of the inferior thyroid, pericardiac, posterior mediastinal, intercostal and the superior diaphragmatic through the azygos and hemiazygos veins or occasionally directly into the trunk of the vena cava. The branches of the inferior thyroid at the level of the larynx form numerous anastomoses with one another and with branches of the superior thyroid. 2. The tributaries to the portal system send their blood through the left coronary vein of the stomach. 3. A few insignificant and irregular branches communicate with the inferior vena cava through the inferior diaphragmatic veins.

All the veins form a thick network of fine radicles, far surpassing the arterial anastomoses. The veins are most numerous in the lower part of the œsophagus. There is an internal plexus in the submucosa and an external or pericœsophageal plexus which form numerous anastomoses through the muscular coat. The pericœsophageal veins are grouped into anterior and posterior bundles, which pass to the cardiac orifice with many connecting twigs.

Besides the connections between the general and the portal circulations by way of the œsophageal veins, there are two other means of establishing collateral circulation in cases of portal obstruction—the system of Retzius, consisting in the venous radicles from the abdominal wall that communicate with the mesenteric veins and flow into the inferior vena cava or one of its branches, and, secondly, the hemorrhoidal veins that communicate with the inferior mesenteric and the internal pudic.

[The author omits the communication through the veins of the round ligament of the liver.]

It has long been recognized that varicose enlargement of the œsophageal veins may take place, and almost always in conjunction with some disease of the liver that by contraction interferes with the flow of blood in the portal system. In the reported cases no cause is assigned for the enlargement of the œsophageal veins, while those of the system of Retzius and the hemorrhoidal veins are not implicated—at least, no mention is made of the veins of Retzius, while Charcot states that the hemorrhoidal veins are never enlarged in hepatic cirrhosis, but are constantly found contracted and impenetrable (undurchgängig). [It would seem that the author must have a definite series in mind.]

In 1858 Faurel and Diberder reported two cases of varix of the œsophagus

* Condensed translation by A. L. Benedict, A.M., M.D., Lecturer on Digestive Diseases, Dental Department University of Buffalo.

†Assistant at the District Polyclinic at Leipsic.

that ended fatally on account of hemorrhage. Bentz in 1884 could collect only sixteen cases out of the entire literature of the subject, to which he added three of his own observation. Sundberg in 1886 published another case.

The obstruction in the portal circulation is referred to hepatic cirrhosis in most cases. Blume found that while in a few cases the interference with the circulation was slight, in most instances it was marked. From the formation of collateral blood-paths, the obstruction was postponed and œdema and ascites were generally wanting or occurred late. Besides hepatic cirrhosis, syphilis of the liver, all contracting processes and interstitial connective-tissue overgrowth, Zenkler considers senile atrophy as prominent in the etiology of œsophageal varices. [Evidently cirrhosis is used in a narrower sense than is customary in this country.] Yet varices occur in only 21 per cent. of his cases of chronic atrophy of the liver and in only 5½ per cent. of those of hepatic cirrhosis. The ages of his patients varied from thirty-nine to seventy-one. Two further cases are of interest, those of von Frerichs and von Sundberg, in which a thrombus in the portal vein led to the formation of varices.

The course of the varicose veins, as Blume found by injecting the coronary vein of the stomach, is as follows. In the neighborhood of the cardia, a few centimeters above or below, several veins rise from the deep tissues under the mucous membrane and ascend perpendicularly in the œsophagus, usually in two or three cords. The varices are usually found in the lower third of the œsophagus. Blume holds that cases depending on general venous stasis progress equally in the whole length of the œsophagus, while those depending on the back flow of blood from the portal system begin below and gradually extend upward. The first chart of the Kast-Rumpel atlas of pathological anatomy affords an example of œsophageal phlebectasia depending on general venous stasis. Klebs pictures varices projecting on the surface of the lower part of the œsophagus and appearing as long blue ridges thickened into knots here and there and for the most part covered by a very thin layer of tissue.

The principal symptom, or rather usually the only clinical symptom, of the disease is hemorrhage. Klebs says that injuries to the varices can bring on dangerous hemorrhages, especially when they pass over the rim of the cardia and come in contact with the gastric juice. Several times section demonstrated the exact place of injury to the vein. At other times nothing noteworthy was found; the examination, however, was made not for extravasations of blood, but always for real hemorrhage and less of substance.

The present case was that of a girl aged six, healthy till two years and a half before death. At that time frequent headaches and occasional pains in the body set in and the child became pale and weak. There was no digestive disturbance except frequent diarrhœa. Vomiting never occurred. In the spring of 1892 repeated hæmatemesis set in with pains and diarrhœa which improved under treatment with opium and ice. In the summer of 1893 the child again came under medical care on account of indefinite distress in the abdomen. No further details are known till October 14, 1893, when the child was brought to the Polyclinic in a condition of profound anæmia, with the statement that she had had a violent hemorrhage the evening previous. Examination of the chest, especially of the heart, revealed nothing abnormal. The abdomen was somewhat enlarged, bloated, but in no place painful or tender. The diagnosis was made of gastric ulcer and opium and ice were prescribed, followed three days later with pills of silver nitrate. Hæmatemesis occurred again on October 19th in greater amount than before. The vomited matter was bright red mixed with dark clots. On the next day the hemorrhage recurred with bloody coffee-ground stools. The pulse was small and very weak. The temperature rose at noon to 39° C. The child lay in such a condition that the propriety of saline injections was considered. In the evening the temperature had sunk to 37.6° C. and the pulse, though extremely weak, was stronger. Its frequency was 160. The next day the patient was in a condition of extreme weakness and quite apathetic, complaining only of thirst. On October 22d the pulse was 156, sinking on the following day to 132, and thereafter ranging from 120 to 130. Nourishment was maintained with iced milk and the only drug used was opium. On October 30th, ten days after the

hemorrhage, marked restlessness ensued, manifested by convulsive movements of the extremities and especially of the facial muscles, while speech became impossible and much gnashing of the teeth was audible. These symptoms increased and in addition choking on attempting to drink, smacking and shouting sounds occurred. Thus in a few days a chorea of high grade developed. The disease did not continue long at this pitch, and from November 10th a considerable retrogression was evident. Speech returned first, while the choreic movements of the extremities continued for a time. The last trace had disappeared by November 18th; that is, the disease had spent itself in three weeks.

From November 9th a systolic bruit was audible at the apex and the base of the heart as well as over the larger cervical vessels. About the same time enlargement of the heart, both to the right and the left, was demonstrable, features which left one in doubt as to whether they should be ascribed to marked anæmia or to chorea. The vomiting had stopped on October 20th, and the child gradually recovered from the profound anæmia, so that about the middle of December she could leave her bed for an hour at a time. The diet was regulated most carefully. Till the beginning of December nourishment consisted only of milk and infant's meal; then it was extended to eggs, tender meat and green vegetables. All this time there were no gastric symptoms; the appetite was good; only occasionally was complaint made of a slight oppression in the region of the stomach and at times the abdomen was slightly distended but without showing any fluctuation. At 3 P.M., December 26, 1893, violent hæmatemesis set in. Shortly before the patient complained of distress and pain in the stomach. About three-quarters of a liter of bloody gastric contents were vomited, having an acid reaction.

An error in diet was responsible, the child having taken a piece of potato against her mother's will. Vomiting returned the next morning and on January 9, 1894, the child died, apparently exsanguinated. The pulse had risen to 160 and so remained till death. There was no fever.

On autopsy the next day the heart was found greatly dilated, especially in the ventricles. The heart muscle was lax and of a yellowish-red tint. Through the endocardium shone intensely yellow flakes and stripes. The free edge of the mitral valve was slightly thickened; at the line of closure of the outer leaflet there was a soft reddish-gray translucent deposit the size of a cherry-pit. The foramen ovale was closed. There was nothing significant about the lungs, nor was there any pleural or pericardial effusion. In the abdomen was about 400 c.c. of milky, turbid fluid containing 0.54 per cent. of fat. The peritoneum was free, the lymph-nodes were not enlarged. The liver, spleen and kidneys were fatty degenerated, conditions that, with the general adipose deposit that was especially marked in the abdominal parietes and the mesentery, were to be ascribed to the anæmia. The spleen was very large. A careful dissection of the portal vein, thoracic duct and vena azygos was negative, and the single positive finding was the existence of marked varices in the œsophagus. I have prepared a water-color to represent the clinical picture. The veins ran mostly in two cords, of which the larger one, on the right, consisted of dark blue twisted and knotty veins about the size of a lead pencil. These veins took their origin from two trunks that, rising under the mucous membrane through the muscular coat, about two centimeters below the cardia, came together like the prongs of a fork and ascended in the œsophagus perpendicularly, giving off a lateral branch at the point of union. The latter also rose perpendicularly, but without marked enlargements, and was visible through the mucous membrane as a more diffuse, blue-black streak. Between the two main trunks were numerous anastomoses that were especially numerous above, and there the mucous membrane took on a diffuse dark redness. At the level of the cricoid the injection ceased and the normal pallor of the mucous membrane took its place. No lesion was discoverable in the mucous membrane which could be considered as the source of hemorrhage. In the loose connective tissue between the trachea and œsophagus there was visible a varicose venous cord as thick as a pencil and about six centimeters long. The gastric mucosa was exceptionally pale. There was no varicosity on the outside of the stomach nor elsewhere in the portal system.

The diagnosis of gastric ulcer, depending on the symptoms, was made with some hesitancy, since previous experience is against its occurrence under the age of ten. Ewald and Hennoch have recognized gastric ulcer in children, the former's two cases lacking only hæmatemesis to complete the typical picture. Brinton in 226 dissections of gastric ulcer found it twice in children under ten.

After the occurrence of hemorrhage in the present case in the fourth year, it occurred a year and a half later with renewed violence in spite of every treatment. Previous medication with silver nitrate and after the last hemorrhage with liquor ferri sesquichloridi was abandoned as useless; the only rational treatment seemed to be the strictest diet. How important this was and how urgently it was indicated without our knowledge the section revealed, as well as the fact that error in diet even to the extent of swallowing a piece of potato proved to be the direct cause of fatal hemorrhage through laceration of a vein. This conclusion is not weakened by the failure to find the lesion, since death followed on the thirteenth day after the last hemorrhage.

The distention of the abdomen that is occasionally mentioned in the history found its explanation at the necropsy in a slight ascites of milky consistency. [Without the positive statement that the abdomen was dull, at least in the dependent portions and in the explicit absence of fluctuation, one would naturally attribute the enlargement to tympanites.] Such an exudate, according to Quincke and Senator, arises either through mixture of chyle or from fatty detritus. Through an unfortunate accident microscopical examination, the principal test, was prevented. If we had to deal with an ascites adiposus, as Senator has designated it, the microscopical examination would have shown cellular elements. According to previous experience, the fact that 0.54 per cent. of the fluid consisted of fat does not contribute to the certainty of diagnosis. The rich fatty degeneration of organs and the fatty infiltration supports the conjecture that the fluid was an ascites adiposus. Klebs has mentioned a case in which he showed such an ascites to have arisen from the fatty degeneration of the mesentery. That this ascites could have led to stasis and consequently to the formation of œsophageal varices is disproved by its small quantity, and it is to be considered as an accident, not an etiological factor.

Highly interesting, though not properly belonging in this discussion, is the onset of chorea immediately after the violent hemorrhages. Although there is nothing in the history about an earlier choreic condition which might have been exacerbated, the present choreic seizure certainly affords an example of the dependence of the disease on anæmia. Its rapid onset and speedy recession—the entire duration of the attack being scarcely three weeks—show the causal relation of the hemorrhages. Similar cases are few in medical literature. Litten's work on the etiology of chorea mentions the frequent occurrence of chorea following anæmia [not due to hemorrhage]. Stephen MacKenzie cites 439 cases, in about 20 per cent. of which a high grade of anæmia existed. The disease is also common after pregnancy, disturbances of menstruation and during childhood, especially in the female sex, and these facts lead Joffroy to term it "nervose cérébrospinale d'évolution." Litten observed in a primipara in the eighth month, immediately after venesection, choreic movements in the face and arms, spreading to the whole body after a repetition of the venesection. After delivery which followed rupture of the membranes the patient died of exhaustion. A similar case of chorea set in on the sixth day after violent nose-bleed and also ended fatally. [The similarity is not very evident. The former case with repeated venesection and premature labor following rupture of the membranes would suggest uræmic eclampsia.]

To return to the findings of the autopsy. The case must be included with some of Rokitansky's and Eberth's as presenting no appreciable obstruction to the circulation. Eberth has indeed considered gastric catarrh of twelve years' duration in a man of forty as an etiological factor in the production of œsophageal varices, and Duret has advanced the hypothesis that normal respiration could bring on an ectasia. During expiration there is increased pressure in the portal system, which suddenly sinks in inspiration. The vessels dilate and the suction of the enlarged thorax causes a rapid determination of blood in the direction of least resistance. Now as soon as the liver affords an

obstacle to the flow, the connection of the portal vein with the principal veins of the thorax through the œsophageal veins affords a way around the portal system, and the ever-recurring distention of the veins will finally bring about a permanent ectasia. But if an everlastingly (unendlich) frequent condition [chronic gastric catarrh] and a normal one [respiration] tend to produce this dilatation, why are not varices of the œsophagus more frequently observed?

The youth of the patient has no decided bearing on the etiology of the affection. I pass over the question whether we must assume a congenital anomaly of the œsophageal veins or a diminished resistance on the part of the vascular walls which gradually allowed the ectasia to develop under circumstances of impeded circulation somewhere, and I would report the case only as a casuistic example of a strange abnormality of the veins of the œsophagus.

GASTRO-ENTERITIS OF CHILDHOOD.*

CHARLES CARY, M.D., BUFFALO, N. Y.

Night before last there was brought to the hospital a little Arabian boy who exhibits so many peculiarities that I have concluded to present his case.

The mother being unable to speak English, the history which we get is vague. The child was weaned two months after birth, and has been reared on the bottle for the remaining three months of its life.

It is much emaciated and the skin is wrinkled like that of an old, old man. The baby is pale, dull, inactive, but it has no rise of temperature. The abdomen is very full; the line of separation between the stomach and the colon can almost be seen through the skin. The stomach and intestine, being thus distended, are tympanitic on percussion. There is very little tenderness of the abdomen, otherwise the child would cry loudly when I percuss and palpate. Yesterday the evacuations were very abundant in number and bulk. In character they were watery and greenish, containing considerable undigested milk. The mother gave us to understand that the child had been sick five or six days, with frequent watery stools and vomiting. This is a condition that will be encountered very often, and will be seen much more frequently among the ignorant than the better classes. It is a common condition attending the bottle-fed child. It is a cause of death for about half of all infants. One-third of all persons born die before completing their second summer. On account of acute illness, peritonitis, shortly after the birth of the baby the mother was unable to nurse it, and she shows an anxiety about the infant which is truly pathetic.

Parents frequently have begged me to do something for a child, and on asking a few questions I have found the trouble to be with the diet. For example, in one case I was told that the child was extremely fond of pickles and would eat little else. Errors in diet often do not suggest themselves to mothers as the cause of the illness of children. The food of breast-fed children enters the stomach with practically no access to the air. In artificial feeding, however, the food is frequently contaminated with atmospheric bacteria, and catarrhal enteritis follows from the irritating quality of the food. As a rule, there is not merely an enteritis, but a similar inflammation extending throughout the entire gastro-intestinal tract. We are not able to gain any definite information as to what this child has been fed. It may have been reared on sugar and water, or on potato pap, or on solid food, but the probability is that the nutriment has not been appropriate to the delicate condition of the child's digestive organs. Only a few recurrences of the diarrhœa could be tolerated in the present weak state of the child, and the outlook in any such case depends upon the reserve of vital strength.

The first point of treatment is to clear out any accumulation of irritating sub-

* A clinical lecture at Buffalo General Hospital.

stances in the alimentary tract. It is the common practice and, I think, a very good practice, to begin the treatment of any such case with a dose of castor oil. A good big teaspoonful would be the proper dose for a child of this age. Castor oil is a safe remedy even in full doses, any excess being carried through the bowel, but we must bear in mind that too liberal use will cause griping. It is, on the whole, much better to give a dose which will assure the thorough clearing out of the intestine than to allow any chance of delay. In addition to the cathartic treatment, it is well to wash out any mucus that may be in the large intestine by copious enemata of water about the temperature of the body, unless there is some fever, when the water may be a little cooler. Boric acid is often added to the water, to make a saturated solution. Some, even with infants of this age, begin their treatment with lavage of the stomach. Those who have used it are very warm in their praise of this means of treatment, but personally I have never used it in so young a child as this. The stomach tube used in such cases is usually a catheter. It seems to me that the washings can be conducted by the natural processes, for such children, as a rule, are very thirsty, particularly if they have any degree of diarrhœa, and they will take almost as much water as one will give them. They will usually take the water with greater avidity if it is sweetened a little or if it is flavored with some aromatic oil which in itself is a good antiseptic and carminative. Vomiting, also, is not uncommon, and thus the stomach can be washed out quite thoroughly. I would not, however, condemn lavage of the stomach even in infants.

After clearing out the stomach and bowels, the next consideration is what to feed the child. If you see the case at the beginning of an acute attack, it is better to suspend all nutrition for twenty-four hours, as the child can much better stand twenty-four hours of complete fasting than twenty-four or forty-eight hours of diarrhœa. By mild sedatives, a few drops of paregoric in water, the child can be satisfied and carried through the twenty-four hours. In less acute cases, however, nourishment is demanded. In the present case, for example, not knowing what the child has been taking, I should advise milk diluted two or three times with water. The food should be sterilized and the milk, by preference, peptonized. If after twenty-four hours the diarrhœa has not been checked, we shall know that a different treatment is needed. Under these circumstances we should suspend the milk and give beef-juice, which is always readily assimilated by infants. By beef-juice I mean the extract made by pressure from fresh raw beef, seasoned slightly and fed warm but uncooked. This is not suited to be a permanent article of diet, but is intended to tide over an emergency.

As a rule one will not need to resort to much medicinal treatment. This child, for instance, has no desire for food and will require no paregoric, which, of course, is not to be given unless demanded by the cravings of the child for food. If the case is still milder it is well to check the process of fermentation by the administration of certain drugs, and for a child of this age or a little older I know of no remedy better than bismuth subnitrate suspended in mucilage, perhaps with a little prepared chalk added. The common error in such treatment is in not giving large enough doses. Quarter or half grain doses for an infant like this would do no good whatever. A fair dose would be from three to seven and a half grains (0.20–0.50). The dose is practically unlimited, and while one does not want to fill the child's stomach with this insoluble salt, its action is local and largely mechanical, so that a minute dose is worthless. One must bear in mind that the main treatment is the care of the diet and that all medication is, to a degree, secondary. When, as in the present instance, it is necessary to feed before the digestion has recovered its proper tone in order to save the child from collapse, small quantities of beef-juice with from one to five drops of brandy, depending on the age, may be given at frequent intervals, even so often as every hour.

On account of the yeasty growth on this child's tongue I have prescribed calomel to be given for a short time only, in doses of $\frac{1}{10}$ grain (0.006) after each feeding. The child has also been taking peptonized milk diluted with an equal quantity of water, and under this treatment vomiting has ceased, diarrhœa has diminished very much and the child has been quiet and contented. I rather expect after twenty-four hours to be able to withdraw the

mercurial and to increase the nutriment by adding to each feeding a little beef-juice. I shall feel my way very carefully, for one or two upsettings of digestion might be enough to carry the child away.

Some might call this a cholera infantum. It is a little late in the season for that trouble; cholera also usually comes on with greater severity, with more copious serous stools, and very often the stools are so abundant and watery that the child dies in collapse within forty-eight hours. Commonly, however, the watery stools continue, but the patient either succumbs more slowly or gets well. This child has had its digestion impaired by long-continued errors in diet; there has been induced more of an enteric catarrh than of a cholera. Infantile cholera, though partaking of the nature of an infectious disease, has no specific bacterial cause. There are always bacteria in the intestinal evacuations; when digestion is disturbed the number increases and the variety may also increase, but I believe there has been no particular germ isolated as the cause of cholera infantum.

We must not overlook the child's skin, which is harsh, dry and leathery. This condition is very largely due to lack of nutrition. The child should daily receive a warm bath, taking care not to chill it. It is a common practice to nourish such children further by inunctions of cod-liver oil, which have the objection of causing a very disagreeable odor from the oil becoming rancid. This, however, is a secondary matter, and when children are in a condition of extreme weakness the little additional nourishment that can be introduced by the help of the inunctions may turn the balance favorably.

I think it is rather an open question whether this child will recover. It will depend largely on careful nursing, the supervision of the physician being a secondary matter after he has once laid down the law to be followed by the attendant.

(The child assimilated its food fairly well, but died a few days after, apparently from exhaustion. No autopsy was allowed.)

ERGOT IN THE HANDS OF IGNORANT MIDWIVES DURING LABOR.

G. M. DROSTE, M.D., GRAND RAPIDS, MICH.

On this subject, so far as I know, there is no literature to be found, but I do not think it at all new to any physician who has spent some years in active general practice.

It is alarming to see what suffering, disease and broken-down constitutions are brought about to the gentler sex through the ignorance of women who style themselves midwives. Having within the last few years had an extensive practice in obstetrics, I have come in contact with many different so-styled "practical," "qualified," "long-experienced," "no-doctor-necessary," and other well-named midwives. Thus I have had occasion to observe from their actions and work that while they pretend and, in some cases, honestly believe, to assist and shorten the sufferings of women who are about to become mothers, through their ignorance they do precisely the contrary. The following cases will bear me out in my statement:

CASE I.—Mrs. K.; Polish. Was called at noon July 4, 1888. On arrival I found a midwife in attendance. The husband, who called me, said that the midwife assured him everything was all right and that the child would be born as soon as labor pains would get strong enough. His patience, however, wore out after waiting a whole night and the next day until noon. The midwife did not seem to like the presence of a physician and treated me rather coldly. On making an examination I found a rather small child, with breech presentation, and very low down in the vulva. On asking the midwife how long the child had been in that position, she said, "Since twelve o'clock last night," thus making twelve

hours without any progress. Thinking it strange for the child to be in the one position for twelve hours when it seemed as though it might be born with one good labor pain, I made a more thorough examination. I found the body of the child in the vagina, the uterus high up, and the cervix uteri in a spasmodic condition locked around the neck of the child, holding the head within the womb. I asked the midwife if she had given any medicine and she replied, "Why, yes, doctor, right along since last night, even before the child came down." I called her into an adjoining room and asked her if she knew the reason why the child had not been born sooner. "Yes, doctor," she answered; "her pains are not strong enough." I explained to her the condition that was present and that it was due to giving too much medicine; but she did not seem to understand, nor did she seem to believe my words. I did not care to take the case from her, but advised her not to give any more ergot. On leaving the house I told the husband in case the child was not born in two hours to call me. The next day the husband came to my office to pay me for my call, and I learned that the child had been born one and a half hours after I had left. I also learned from him that the midwife had administered between two and three ounces of ergot within twelve hours during labor the preceding night.

Case II.—Mrs. B.; German; January 18, 1889. On arrival I found a midwife in attendance. On examination I found the cord presenting, the os uteri in spasmodic contraction; the cord very thick but no pulse in it. Midwife had administered ergot all night, but no good labor pains came. After discontinuing ergot for some hours, strong labor pains set in and the os dilated rapidly. The pulse not returning, I suspected the child was dead, the woman being a primipara, over thirty years old and with a contracted pelvis. I administered chloroform and with instruments delivered a dead child. Death was caused by the pressure of the head of child and the spasmodic contraction of os uteri upon the cord.

Case III—Mrs. S.; Polish woman; 1890. Midwife in attendance all night and all day. From what I could learn from her there had been a shoulder presentation at first, but, as she remarked, with the help of ergot and working with difficulty she managed to get an arm down, at which she kept pulling and working until she got tired out. I administered chloroform and delivered by the feet a dead child that by all appearance and according to the belief of the mother had been dead some hours, as she did not feel any life after the arm had come down.

Case IV.—Recently I was called to a Polish woman in labor. Midwife in attendance all night and had given ergot. On examination I found an arm presenting over and in front of the vertex. I administered chloroform, pushed the arm from the head over the face, applied forceps to the head and delivered. Mother and child both did well. I think that had the midwife succeeded in getting down the arm the child would have shared the same fate as the one referred to in Case III.

Case V.—Last winter, while treating Mrs. H. for la grippe, I was asked the cause of certain pains and weakness in the lower part of her back and loins. From answers to questions I remarked that she must have womb trouble, which, however, I would not be able to ascertain without examination. I told her to call at my office after she was well of la grippe, where upon examination I found a bilateral laceration of cervix and a ruptured perineum. The patient's history was as follows: Nine years ago she had had a difficult labor, a midwife attending her and giving her medicine. The child issuing with feet presenting, the midwife took hold of them and pulled forcibly, causing her great pain. She had immediately alarming hemorrhage. A physician was called, who examined and told her that she had sustained rupture of the womb. From that time on patient had always complained; had also had several miscarriages since, but none previous to that labor. I advised her to undergo two operations, to which she consented and was restored to health.

I could cite more cases if necessary. These five cases show sufficiently to what extent ergot is administered by unskilled individuals who out of a valuable remedy make an unfit and dangerous one. I believe that the drug is even too extensively used in the hands of many physicians, and I must admit that I myself have given it during my early years of practice in cases where I should hesitate

to do so now. I have used it less and less, until I now hardly ever have any use for it, and I find that I have better success and better results. Labor is a natural process and should be left in the hands of nature unless complicated. It is true that we very often can assist nature, but as soon as we interfere with a given law or process of nature we are apt to have bad results.

During labor ergot should not be given before the head of the child has passed through the os uteri; for if we do give it before dilatation is sufficient to admit the head we stand in danger of laceration of the cervix. Again, if the head of the child presses down upon a firm perineum which does not readily yield and we give ergot to produce strong labor pains, we stand in danger of laceration of the perineum.

The conditions where ergot is indicated during labor are:

1. Where the perineum is sufficiently softened and yielding, but the head of the child is very large and firm, so that the bones do not shape themselves to the outlet of the pelvis, and thus require extra strong labor pains to expel the head.

2. Again, where the head presses down upon the perineum and labor pains have stopped altogether or are too weak to have any effect.

3. And lastly, where labor has been very severe and tedious and the mother is in an exhausted condition and unwilling to suffer any longer.

The suffering and ill-health ergot produces when administered at the wrong time is not to be expressed by words. But it is not the drug that is at fault, but the individual that handles it. Why not, then, stop the hands that administer a drug which not only causes suffering to noble mothers, but brings even death to beings yet unborn?

This uncalled-for administration of ergot should be remedied, and the remedy to be used I leave open to discussion.

COMMUNICATIONS.

A MECHANISM OF INTUSSUSCEPTION—SPECIMENS ILLUSTRATING EACH STEP IN THE PROGRESS OF INFECTIVE APPENDICITIS.*

ROBERT T. MORRIS, M.D., NEW YORK CITY.

I. *Experiment.*—I shall expose the ileum of a rabbit, and it will then be observed that when it is touched with carbonate of sodium, contraction of the circular fibers of the bowel at the point touched will take place in from fifteen to thirty seconds. The longitudinal fibers of the bowel still carrying on peristaltic movement (a reversed peristalsis, by the way) will invaginate that portion of the bowel which is in a state of firm contraction. I do not know the exact value of this experiment except that it shows the mechanism of one form of intussusception. We know that certain ptomaines produce muscular spasm, and it is fair to assume that some cases of intussusception are due to a poisoning of the muscular fibers of the bowel as in the experiment. In post-mortem intussusception as I have watched it, there has been paralysis of the circular fibers of the bowel and an adjacent segment of bowel has dropped into the relaxed portion, almost the reverse of the mechanism demonstrated in this experiment.

APPENDICITIS SPECIMENS.

II. Appendicitis I believe to be an infective exudative inflammation of the appendix vermiformis, which follows the production of an infection atrium of any sort in the mucosa or in the peritoneal

*Read by invitation of the Board of Directors of the Philadelphia County Medical Society, November 28, 1894.

covering of the appendix. I believe that when the infection atrium has been produced bacteria at once enter the lymphoid structure and the cellular coats, and that then the stage of exudation begins and the tissues are compressed by the exudate. There is no doubt that in the majority of cases we have an exudate compression which is fatal or has a tendency to be fatal to the lymphoid and cellular coats, and the reason is because the lymphoid and connective tissues and mucosa are confined within a narrow tube of muscle and peritoneum. In the colon, when infection begins and exudation takes place, there is abundance of room for swelling, and the interstitial exudation does not lead to compression and anæmia. In the narrow appendix there is not room. The lymphoid tissue cannot do its work as a strainer of bacteria, and therefore the lymphoid, mucosa and connective tissue forming the inner tube are compressed to the point of strangulation in many cases. If not to the point of strangulation there is produced compression anæmia, which allows more rapid toxic destruction of the cells, and the toxines produced by the bacteria which have entered the infection atrium cause destruction of the cells before nuclein can be poured out and the leucocytes do their work. Thus there is frequently rapid destruction of the mucosa and lymphoid coats which should act as a protecting coat, but which is destroyed and becomes a prey to bacteria because it is under compression.

Very early proliferative endarteritis commences, and this occurs, as you will remember, in a small terminal artery, for practically the only arterial supply of the appendix is from a solitary terminal artery. If a branch of the artery becomes occluded, we have a round punch-hole slough formed at the point supplied by this branch. If more of the artery becomes obliterated, we frequently have complete gangrene of the appendix. Only a few hours are required for an obliterating endarteritis to become sufficiently marked to lead to destruction of all parts not supplied with blood by bacteria which are ready to pounce upon such parts. I think that usually in the very early stage of the infection we have a mixed infection. Streptococci are apt to be present, and these with other bacteria send the temperature up. The temperature from infection by streptococci or from mixed infection may be quite high, whereas when the infection is from the colon bacillus the temperature is apt to be not high, but about 100° to perhaps 101° during a most violent attack of infective appendicitis going on to death. This statement in regard to temperature I am almost prepared to make as a direct statement, but I shall wait for more observations before asserting that a high temperature indicates streptococci or mixed infection, and that a low temperature indicates a colon-bacillus infection. I am almost certain, however, that the toxine of the colon-bacillus does not send the temperature high.

Specimens.—The first is a normal appendix removed post mortem.

The next specimen shows the effect of exudation into the appendix a few hours after infection has taken place. The inner tube, composed of the lymphoid and connective tissue, is distinctly swollen.

In the third specimen we find a little rhexis, all the structures being infiltrated with blood.

There is a complete rhexis involving all the tissues in the fourth specimen, the fibers of all structures being separated by effused blood. In the case from which the specimen was removed the wound was very septic and no granulations formed for eight days. The patient then developed pneumonia of the right side, and after the pneumonia was well under way the appendix wound began to granulate and the patient recovered.

The fifth is another early specimen, in which there is a pin-hole puncture. In this case the appendicitis had lasted about forty-eight hours. The artery being obliterated at this point allowed a small pin-hole opening to form.

The sixth specimen, an inch of which has been removed, shows very nicely how the interstitial exudation causes the inner tube to be compressed by the outer tube.

Here is a specimen in which the bacteria have been confined to the appendix for several days and then suddenly passed through the mesappendix, and the patient developed acute septic peritonitis.

Here is another specimen in which a small punch-hole perforation formed and was immediately walled in by lymph. The appendix was quite free, except at the tip, where this mass of exudate held it.

This is a chronic ulcerating appendix.

After the acute stage of infection is passed the ulceration is apt to continue, because the appendix is a nook in which bacteria persist, and after the mucous membrane is destroyed the bacteria are apt to keep up a vigorous onslaught on the exposed tissues. These are the appendices that produce fatty concretions. I have found that concretions in the appendix are phosphatic, fecal, or fatty. Some of these concretions contain 50 per cent. of fat. It occurred to me that possibly a retrograde change in the lymphoid might account for it, and consequently I submitted the lymph coats of several appendices for examination. From normal appendices I obtained 8 per cent. of fat; from appendices with small ulcerated spots 19 per cent.; and from appendices with general ulceration of the mucous and lymphoid coats 26 per cent. This showed that the proportion of fat in chronic ulcerating appendices was very large, and if the products were confined in the tubes it is probable that these fatty concretions come from that source.

Before gangrene in the appendix has occurred we sometimes find gangrene of the mesappendix from thrombosis of the veins and obliterating endarteritis. Sometimes the appendix seems to receive enough nutrition from the cæcum to live a few hours longer than the mesappendix.

After infection has continued for some time—a few years—we frequently find excessive hypertrophy of the appendix. This specimen shows this hypertrophy in an appendix which was the seat of chronic ulceration. Most of the time this patient was without symptoms, but at times he was compelled to give up work. I found the appendix extremely tender on palpation, and learned that of late he had referred the pain to that region.

In some cases after destruction of the mucosa gradual wasting of the lymph coat takes place. This is shown in this mount of four transverse sections. In the first, the mucosa and submucosa are swollen with exudate. In the next, the mucous coat has disappeared and the lymphoid has almost disappeared. In the next, nothing but the muscular and peritoneal coat remain, and in the last there is no lumen and only a little remnant of the muscular and peritoneal coats.

In cases in which the terminal artery is involved quickly in proliferating endarteritis the entire appendix may become gangrenous. Here is an appendix which became completely gangrenous in thirty-six hours. No portion of this appendix remained alive, and there was an opening of about two inches in the cæcum.

After the various structures have disappeared, leaving little but the muscle and peritoneum, there may be marked symptoms from sclerosis of the nerves. The nerves of the appendix not destroyed become involved in the cicatricial contraction and frequently keep up a great deal of disturbance in this vicinity, and not infrequently the movements of the colon are inhibited. As a result we are apt to have chronic constipation. I have now removed several such stumps, and the patients have immediately felt relief.

The patient from whom this specimen was removed had had several attacks of appendicitis, and on removing the appendix I found that it was filled with nematoid worms. The cæcum is a favorite resort for the oxyuris, and I have no doubt that the presence of the oxyuris in the appendix not infrequently gives rise to an infection atrium.

Here is a specimen showing three distinct cavities with contractures between. It was extremely firmly adherent. This patient had a number of mild attacks, and once an abscess opened externally, and finally we were obliged to remove this stump containing three well-marked cavities similar to what we often see in pus tubes.

Among the latter forms is one represented by these two specimens. These were removed from a professor in one of our colleges. He was unable to stand and was compelled to give up his work for a year. On removing the appendix I found these two portions some distance apart. The little short stump represents the healed appendix. The lower portion was an inch and a half away from the stump. It was a focus of infection, and was kept alive by adhesion to surrounding tissues.

If we were to consider the complications of appendicitis this evening we should open up an enormous field. I shall simply show a specimen belonging to Dr. Willard. Here we have an abscess of the liver, which is not an infrequent complication, and probably occurs oftener than is generally supposed. In very mild cases, and in cases in which the infection has

been in progress for not more than two days, I have found infected thrombi in the mesappendix, which could easily lead to emboli and abscess of the liver. I am quite sure that this occurs in cases where appendicitis is not suspected. It is not necessary that there should be gangrene or extensive disease of the appendix to have mesenteric thrombosis and portal embolism.

SUBCORTICAL GLIOMA OF THE CEREBRUM AFFECTING PRINCIPALLY THE ARM CENTER; REMOVAL: RECURRENCE OF THE GROWTH; SECOND OPERATION; RECOVERY.*

ALFRED C. WOOD, M.D., PHILADELPHIA.

For the privilege of presenting the following report of what proved to be a rare and interesting case I am indebted to Dr. H. C. Wood, in whose service at the University Hospital the patient first came under observation, and Dr. J. William White, to whom he was referred by Dr. Wood for surgical intervention.

Briefly, the history is as follows: †

"W. B., aged twenty-eight years, of Irish descent, by occupation a bartender, states that he has always enjoyed good health until the beginning of the present trouble. Careful inquiry failed to elicit any family predisposition which would have a bearing on the present condition. According to his account he first noticed, in August, 1892, occasional twitchings in the left hand; these have recurred at irregular intervals up to the present time, until now they sometimes happen several times a day. They begin with a tearing sensation in the hand, movement and sensory disturbances, however, coming on almost simultaneously. The arm is commonly flexed at the elbow by tonic contractions, though the hand is clonically and furiously moved. Sometimes the attacks are not attended by loss of consciousness; usually, however, of late, the first movements are followed almost at once by unconsciousness and a fall to the ground, there being general muscular relaxation, except that the mouth is commonly drawn toward the left side. On two occasions there have been violent general epiliptiform convulsions. When he first came under observation there was no distinct paralysis of the arm, but a slowly progressive loss of power not yet amounting to complete paralysis has developed. There have been occasional attacks of vomiting. In the early history of the trouble he was free from headaches, but lately these have been more and more frequent and severe. The pain is located in the region of the right temple, and has been at times so acute as to preclude sleep for a whole week. There is also at present a rapidly progressive and severe double optic neuritis, with retinal hemorrhages and large tortuous retinal veins. Thirteen years ago, he says, he was struck on the top of the head with steel knuckles, possibly a little to the right of the middle line; the blow caused him to reel, and he was dazed for a few minutes, but did not lose consciousness. No further trouble was experienced from this accident. The reflexes are normal. The urine is free from albumin and sugar, the specific gravity is 1033, and the reaction is acid. There are no disturbances of the special senses other than the presence of diplopia and some contraction of the field of vision, which latter is evidently the result of the optic neuritis. The symptoms point to the presence of an organic disease affecting especially the motor arm centers in the cerebral cortex, and spreading upward to those of the face; possibly, also, affecting slowly the leg centers, as there seems to be some weakness of the left leg.

"I do not think it possible to make an absolutely positive diagnosis as to the nature of the organic disease, but I have no doubt from the way in which the case has progressed that there is some form of tumor present. The possibility of syphilis has been carefully considered and put to one side by a very active specific treatment which failed to produce any

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†Abstracted from a clinical lecture delivered at the University Hospital upon the patient's case by Dr. H. C. Wood, in January, 1894.

improvement whatever. The important practical question is whether the tumor springs from the meninges or arises within the brain. Here again the diagnosis is simply one of probabilities, not certainties. It is to my thinking improbable that the tumor springs from the meninges. Early in the case pain was wanting, so that the headache from which he now suffers is almost certainly a pressure symptom and not the result of any localized meningitis or meningeal irritation. In the second place, the occurrence of an optic neuritis along with a cortical lesion, situated as high up in the vault as the present must be, would indicate great increase in the brain pressure. A tumor springing from the membranes and so located that in its first inception it would evince its presence by symptoms of irritation of the cortical centres, would, I opine, of necessity have produced, by pressure and secondary changes, complete destruction of the cortical centers by the time it had grown sufficiently to cause the violent pressure symptoms present in this patient. I believe, therefore, that the tumor is of intradural origin. It is probably not tubercular on account of the general good health of the patient, and it must therefore be in all probability sarcomatous or gliomatous. After a very careful consideration I have come to the conclusion to recommend surgical interference for the following reasons: The case is progressively going from bad to worse, and must soon end in death if surgery be of no avail; second, it is possible that I may be mistaken in supposing that the tumor arises from within the brain, and if a meningeal tumor should be found the result of surgical interference would of course be most brilliant; third, even if glioma or sarcoma of the brain substance exists, it seems to me possible to remove sufficient of the mass to relieve the intense pressure symptoms, and probably to increase the comfort and protract the life of the patient. I shall therefore send the case to Professor White for operation."

With such a history, in addition to the careful study already made of the case by Dr. Wood, it is needless to say that in the advisability of an operation Dr. White was fully in accord. The consent of the patient having been readily secured, the day previous to that set for the operation the entire scalp was shaved and well scrubbed with soap and warm water, then washed with alcohol and finally douched with a solution of bichloride of mercury 1:1,000 and carbolic acid 1:50, after which the head was covered with an antiseptic dressing wrung out of a solution of corrosive sublimate 1:2,000 and carbolic acid 1:100. The usual preparatory treatment for a patient about to undergo an operation of this magnitude was carefully carried out.

Operation, 1:30 P.M., January 24, 1894. After the administration of ether the cleansing of the scalp was repeated in the same manner as before. As the symptoms detailed above clearly pointed to implication of the arm center of the right cerebral hemisphere, the position of the fissure of Rolando on the right side was marked upon the scalp, having been determined by the method of Mr. John Chiene, of Edinburgh, which is as follows: A moderately heavy piece of paper at least five inches square is folded upon itself by bringing two diagonal corners into apposition, forming a triangle. This angle being one-half of a right angle is equal to 45 degrees. The free margin is then folded over so that it lies forming the angle whose value is one-half of 45 degrees, or 22.5 degrees. Now, by retaining the last fold and unfolding the first the sum of these two angles is obtained, which equals 67.5 degrees.

As pointed out by Thane, the fissure of Rolando starts on the line from the glabella to the inion, at a point 55.7 per cent. of the distance, measured from the former, and runs downward and forward at an angle of 67 degrees for a distance of about three and one-half inches, the lower extremity of the fissure running slightly more perpendicularly than indicated by the line. For practical purposes it is sufficient to measure half an inch behind the middle point between the glabella and inion at the upper extremity of the fissure. If now the angle of the folded paper, which represents 67.5 degrees be placed at this point with the straight edge along the middle line of the head anteriorly, the folded margin of the paper will represent the position of the desired fissure, which stops at three and one-half inches from the upper extremity. It is now well known that the convolutions at the upper end of this fissure control the movements of the opposite leg, while those at the lower extremity the muscles of the

opposite side of the face; between these the centers which govern the arm are located. Having fixed these points on the scalp with an aniline pencil, it remained to indicate their positions on the skull; this was done by means of a fine drill which was forced through the scalp and rotated two or three times to make an impression on the bone. A large horse-shoe-shaped flap with the base anteriorly, and consisting of all the layers of the scalp, was raised so as to expose the motor area, and the hemorrhage controlled by means of hæmostatic forceps. An inch-and-a-half trephine was applied over the arm center, as indicated by the mark on the skull, and the button of bone removed. The exposed dura was of deep purple color and tense and bulging, but was not adherent. The opening was then enlarged above and below with the rongeur forceps, to the extent of two and a half inches. Before the operation was begun it was decided to proceed after the method recommended for certain cases by Mr. Horsley, which consists in making an appropriate flap and removing the necessary portion of the bone. After the hemorrhage is arrested sterilized gauze is laid in the wound and an antiseptic dressing applied; the removal of the tumor being deferred until the patient has recovered from the shock of this procedure. After the dura was exposed, however, the amount of tension indicated so high a degree of intradural pressure that it was thought advisable to proceed further. The dura was very carefully divided and turned aside. The convolutions exposed were deeply congested and bulged into the wound, showing unmistakably that the seat of trouble had been exposed. Palpation did not throw any additional light on the condition, as there did not seem to be either distinct resistance or undue softening. An incision into the most prominent portion of the swelling revealed what at first seemed to be a cyst with a wide zone of altered brain substance surrounding it. The tissue around the cyst was dark in color, and contained a few small extravasations of blood, and upon closer examination was thought to be a new growth with secondary central softening, giving the appearance of a cyst. This mass was found to merge into healthy brain substance on its different aspects without any attempt whatever at encapsulation or of sharp demarcation. The removal of this tissue was effected by the cautious use of the knife, scissors and curette. It was impossible to remove it as a whole on account of its soft consistence, and it was therefore taken away piecemeal. There was no way of judging when the tumor had been entirely eradicated, but the operation was discontinued as soon as healthy brain tissue appeared to have been reached on all sides. The cavity left in the brain was about the size of a large walnut. Bleeding points were ligated where possible, a drainage-tube inserted, the wound packed with iodoform gauze to arrest the bleeding which still continued; the wound in the dura was closed by catgut sutures, except at the point where the tube and the gauze came out, the flap stitched in place with silkworm gut, and an antiseptic dressing applied. The operation was well borne, and the patient came up from the ether nicely, suffering only moderately from the shock. As the effect of the anæsthetic wore off it was discovered that the left side of the face was flattened and expressionless and when voluntary motion returned it was found that there was complete paralysis of the left arm and leg. At 10:30 P.M. of the same day motion began to return in the paralyzed leg, and by twelve o'clock, midnight, the patient was able to flex the limb and move it about. Sensation was not impaired. The course of the wound was satisfactory throughout, the iodoform gauze was removed on the second day, and the drainage-tube two days later; there was no discharge of pus at any time, and healing was prompt except at the point occupied by the tube, which closed by granulation. The paralyzed side of the face soon began to improve and went on to complete recovery. Motion in the arm began to reappear two weeks after the operation, but has made little improvement.

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It was soon found that the scalp overlying the trephine opening in the skull was becoming elevated. This condition increased very rapidly until a tumor the size of an egg had formed in spite of continuous firm bandaging. The swelling was at first thought to be due to what is known as fungus cerebri, but it later became apparent that it was a recurrence of the neoplasm. There were no subjective symptoms of intracranial growth.

In May, having made the same preparations as before, a flap was dissected back from the swelling, the opening in the skull enlarged, and a considerable quantity of substance similar in character to that removed at the first operation was taken away. The distinction between the healthy brain substance and the tumor was more pronounced, so that the removal of all the growth could be made more complete and certain. There was very free hemorrhage, which, however, yielded to pressure, the wound was closed without drainage, and the usual dressings applied. The operation was immediately more serious than the first, but the patient again rallied well and was up and about again in a few days.

Since the moment of the first operation there has been absolutely no headache, no recurrence of the spasms, not even an abnormal sensation, and the vision, which was very imperfect before, now seems as good as it was previous to the beginning of the trouble.

Microscopic examination of the tissue removed showed the appearance of a glioma.

The patient left the hospital and passed from observation until about six weeks ago, when he stated that he had been entirely free from all symptoms during the interval. He walked well without a cane, although the left leg is somewhat spastic. The functions of the arm have not improved much. Since leaving the hospital, however, there has been no attempt to improve the condition of the limbs by massage or electricity, so that failure to make greater progress toward the restoration of the muscular tone of the left arm and leg may be due in part to this neglect. There is now some increase in the knee-jerk on the left side, indicating descending degeneration in the cord. The scalp over the seat of the former operation is depressed, as is always observed in these cases if the bone has not been replaced or substituted by a portion from another source. The part seems entirely healthy; there is no evidence of a return of the growth. The patient states that he eats well, sleeps well and is up to his usual health and weight.

The features of especial interest in this case are: (1) The accurate location of the growth clinically; (2) the precision with which the tumor was exposed by the trephine opening; (3) the immediate and complete left sided paralysis, followed by perfect restoration of the normal condition in the face and the return of a very fair degree of function in the leg, while motion in the arm has failed to improve markedly, showing that the arm center has probably been completely removed, while the face and leg centers were but slightly encroached upon at the operation, and although suffering temporarily from the traumatism, have preserved their integrity; (4) the recurrence of the growth followed by its successful removal, the patient remaining well until the present time, now seven months after the last operation and eleven months after the first; (5) the hemiparesis did not precede the spasms in this case, and myotonia was absent. It is claimed by Mills, Sequin, and others that both of these conditions are to be noted in the subcortical lesions of the brain, and in a case recently reported by Diller and Buchanan the convulsions were preceded by paresis.

The present position of cerebral surgery marks one of the great achievements of the healing art, and has been made possible entirely through the agency of modern aseptic technique. We do not now consider it a more serious matter to expose and explore the brain than the peritoneum. Unfortunately the affections of the brain are not so frequently suitable for surgical attack as are those of the peritoneal cavity. However, with the seat of numerous important functions of the brain already determined, with the constantly increasing certainty with which the neurologist is able to definitely locate the exact seat of numerous pathological processes, with the ability to cut down and expose these points with precision through a knowledge of cranio-cerebral topography, and with the present improved operative technique, the legitimate field of surgical interference must grow broader and broader. To-day it is not sufficient to rest with the diagnosis of a brain tumor; but, having determined its presence, it is incumbent upon the physician to extend to the patient the same opportunity for relief that would be granted him in other surgical affections.

It is evident that in order to successfully remove a tumor of the brain without taking the life of the patient it must be situated upon or near the convexity.

From a careful study of the post-mortem records of 600 cases of brain tumor by Starr ("Brain Surgery," 1893) there were found 46 in which an operation was indicated by the general and local symptoms, and in 37 (6 per cent. of the total number) the conditions were such that the tumor could have been easily removed. The average proportion of brain tumors that are favorably situated for removal, as given by various authorities from a study of post-mortem records, is 7 per cent. It is especially interesting to note that in the cases analyzed by Starr the tumor could have been removed easily and with safety to the patient in at least 78.7 per cent. of those in which the symptoms pointed to a growth in an accessible region. There is no doubt, however, that the number will be much greater in the future for the reasons already mentioned.

In regard to the mortality of these operations the same author, from a study of the operations so far reported, finds that in a series of 81 cerebral tumors the growth was successfully removed 54 times; of these 39 patients recovered and 15 died, the percentage of final recoveries being therefore 48.14.

Erb reports a case (quoted by Starr) which is so similar to the one just detailed in many particulars that it is here reproduced.

The patient was a man who had suffered from the general symptoms of brain tumor, viz., headache, vomiting, vertigo and optic neuritis for some months. The development of occasional spasms, followed by paralysis in the left arm and leg, indicated the central convolutions of the right hemisphere as the probable position of the tumor. Czerny operated in November, 1890, and found the tumor to be an infiltrated glio-sarcoma, and removed a part of it, its complete extirpation being impossible. The patient recovered from the operation, was very much improved for eight months, and then began to suffer from the old symptoms. In November, 1891, his condition had become so bad that it was thought best to repeat the operation. The tumor was found to have grown again, and a large part of it was removed. Again improvement was very striking, but at the date of the report—July, 1892—a third operation upon this man was in contemplation, the symptoms having reappeared.

As a result of his studies, Starr states that the large majority of the gliomata and the glio-sarcomata were infiltrated in the brain substance to such an extent as either to have escaped detection at an operation or to have been impossible of excision. When it is considered that this statement is based upon a study of 600 cases, the one here reported must be considered as having terminated unusually successfully.

The cause of these tumors is as obscure as is that of those situated upon other parts of the body. In a large number of the cases a history of traumatism will be obtained, but whether or not this has any etiological bearing it is impossible to say. The patient whose case is detailed above reports having received a blow on the head thirteen years ago. At the time of operation there was no evidence of injury either to the scalp or in the skull.

CLIMATOLOGY IN CIRRHOTIC RHINITIS.*

C. ROBERTS BINDER, M.D.,† PHILADELPHIA.

The pathological changes in atrophic rhinitis present a subject for much controversy—pathologists differing in their *à priori* investigations. Therefore a clinical *à posteriori* reasoning is accomplished under difficulties which induce factionalism as to whether the tissue metamorphosis is the result of a progressive hypertrophy, or has it its own isolated causes classing it as an affection *per se?* Nevertheless, we have a cirrhotic state to combat. Let it be the result of a hypertrophy, as claimed by some researchers, or the result of a pathogenic coccus or bacillus, as accounted for by others, it still maintains the same course that scleroses do in other organs. That is, a prolific development of tissue cells, in various

*Read before the Philadelphia County Medical Society, December 12, 1894.

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stages from round cells to developed cicatrices, causing the caseous degeneration of epithelium, which result is directly due to a progressive contraction. This contraction, while homologous to the scleroses in other organs, owing to the situation, is more accessible and, consequently, more amenable to treatment by atmospheric changes, and directly subject to increased exacerbations when the surroundings are unfavorable. As for myself, I feel complacent over the fact that climate reveals to me measures of pronounced success in the amelioration and possible cure of this odious disease. As for local applications, my experience has been futile, though at the same time I have persevered. Likewise, I do not doubt that this is the experience of all practitioners in the treatment of this stubborn malady; and hence it behooves the thoughtful rhinologist to consider some method at his disposal which will enable him to locate the patient upon a vantage-ground, where the morbific changes will be inhibited and the remnants of healthy tissue and glands be stimulated to normal physiological action, overcoming gradually a lesion that ridiculed a therapeutic medicinal treatment.

The paramount evil is apparent in this affection as in all chronic diseases—social ostracism. Truthfully, it is more apparent here than in some others; the offensive smell which is noticeable in the large majority of cases not only renders them unfit for many offices of social man; but it must be constantly a reminder of their infirmity, inducing melancholia and other psychical phenomena. The results of this condition can be depicted by observing physicians: that deplorable state which they have seen among the hopeless—the epileptics, the maimed, the phthisical and the insane. Since colonization has done more as a restorative to the epileptics than have medicinal or operative measures, and the healthy offspring of the tuberculous immigrant in Colorado demonstrates what can be done for the afflicted who fear nature's law of heredity, the scientific climatologist conjectures wisely when he considers "what might be done for the chronic invalid in colonies, established in suitable places and arranged politically, that they might compete with their fellows for a livelihood." This would not only be a step toward Utopia, but a lesson of philanthropy that only could be accomplished by the highest grade of civilization, urged and abetted by a compassionate humanity. Moreover, when morphology—and this refers more especially to morphological teratology and embryology—is established systematically in medical diagnosis, then will the treatment of many chronic diseases resolve itself into colonization. The reason of this is patent, for the profession will recognize more explicitly causes of evolution and also those of atavism.

Ozæna, the prevailing symptom, though sometimes absent—as I have seen it—is by no means diagnostic of the condition. Ozæna may be the result of tuberculous, syphilitic and carious ulcerations, and even a result of accessory disease, although Drake claimed originally that atrophic rhinitis never existed unless accompanied by antral, ethmoidal or sphenoidal disease. Since, according to my view, the ozæna is due to the caseous degeneration of epithelium, this symptom is dependent entirely upon the intensity of the cirrhosis and, if I may be allowed to introduce E. Frankel and Krause's theory, the diathesis and environments which favor the propagation of the "bacillus fœtidus." Why the *bacillus fœtidus* evinces itself in some cases and not in others is a question that should be settled by the department of bacteriology, although the clinician is fully aware that the diathesis, surroundings and other incidentals dependent upon the vocation of each patient augment the development of this bacillus. Moreover, the site of the lesion is in itself a septic location, which is modified by the anatomic conformation of each individual's nose which is unfortunately attacked. This truth is another clew which the morphologist can employ in the revelation of the mysteries of anomalies and reversions. I have seen the typical nose of the anatomist's chart in clinics, but I have never seen two identical nasal chambers, either in a physiological or pathological state. Therefore the normal structure, prior to the pathological development, is the foundation upon which the intensity of the lesion depends; hence the peculiarity of each individual case.

The lesion involves the nasal portion of the respiratory tract, and, in my estimation, any lesion implicating this tract, whether in the peripheral or central por-

tion, prevents proper aëration of the blood. Hence the anæmia varies proportionately to the amount of tissue involved in this cirrhotic process. Notwithstanding, the anæmia should be treated with hæmatinics and bracing atmosphere in which there is an abundance of oxygen; the mountains of Pennsylvania and New York in summer and the Atlantic seaboard in early spring fulfill these requisitions. Secondly, the patient's temperament should be considered. I should divide disposition into two states: irritability and repose. The general rule is, usually, infrangible, *i.e.*, light-complexioned mankind belongs to the reposed in temperament, while dark-complexioned are irritable. In the selection of an abode of health for the afflicted, the above must be well borne in mind; as it is of the utmost importance to send the irritably inclined to climates which are of a sedative nature. Contrarily, the reposed should be sent to stimulating resorts, where animation will cause them, in part, to forget their malady.

The primary requisite in promoting the domination of the healthy titsue and fostering a metamorphosis in the disorganized structure in all cases is outdoor life; that is, not a definite length of time each day, but if it is possible to remain in the atmosphere twenty-four hours it will the better accomplish the desired result. The sleeping apartment should be roomy, and a free circulation of air should be active during the sleeping hours as well as when the room is unoccupied. Above all avoidances steam radiation should be placed. The dry air should be eschewed at all times, for the reason that the sufferer with cirrhotic rhinitis—unless the pathological surface is of small area, and this I have never seen—cannot infuse the inspired air with sufficient moisture to insure a salutary influence upon his economy. Extreme cold should be shunned, and also localities that are extolled for dryness, per example, Colorado and New Mexico, in the United States, and Egypt abroad. One of the worst evils which characterize these places is the violent sand-storms within their domain, causing a mechanical irritation to a membrane passing through the various stages of chronic inflammation, and also causing a painful nasopharyngitis. In all cases that have come under my notice in Philadelphia, subjectively and objectively, the disease has been augmented during prolonged dry and cold spells. Contrarily, the summer months, especially the moist, warm days, benefited and relieved the patients and checked the process of destruction.

The abode and climate of preference, from which superior results will be obtained, is one, the composition of which consists of: picturesqueness, warmth, balminess, equability, stimulation or sedativeness (according to the temperament of the patient). Of these conditions I shall speak separately.

Picturesqueness affords solace to the restless and fosters a feeling of joy and careless demeanor in those who are morose. In fact, there is nothing so free of sickly contamination as an ever-varying landscape.

Warmth is the next quality which I wish to extol; and by warmth I mean a temperature of over 70° F., and it may range to 84° F. This is requisite for two reasons; it aids in moistening the inhaled air, and, owing to its mildness, the small space of healthy tissue can perform its function admirably. Cold air, on the other hand, not only cannot impregnate itself with moisture, but it is deleterious to the healthy membrane and causes its hasty destruction. The second reason for warm air is the opportunity that it affords for outdoor exercise, without bundling in swaddling-clothes, which impede free circulation and interfere with the glandular system. This system must be kept as near perfect as possible if a cure is to be hoped for in rhinitis cirrhotica. Moreover, accompanying this affection, or rather as one of the sequelæ, is a functional disturbance of the aural organ, due to agglutination of the mouths of the Eustachian tubes in the naso-pharynx. The dripping of viscid mucus from the nose is responsible for this plastering process. Warmth, combined with a moderate relative humidity, is not only a preventive of this troublesome symptom, but a positive relief in cases of some length of duration.

Balminess is a combination of moisture and sunshine tempered with warm currents such as would be blown from the ocean by light breezes, and experienced in resorts along the southern coast of California, eastern shores of Italy, and that delectable country of southeastern France and adjacent Italy washed by the shores of the Mediterranean Sea. It insures the fatuitous victim from the fear of "catching cold,"

and for this reason allows him to take outdoor exercise with a feeling of immunity. The moisture in a balmy atmosphere is due to the degree of relative humidity; the latter is directly dependent upon the influence that the absolute humidity has upon the temperature. Since warmth is a component part of the climate I have recommended, it is well to observe that an extremely damp locality be avoided, for the results which are hoped to be obtained from moisture will not be forthcoming, but instead the patient will suffer from a high degree of relative humidity. In order to avoid excessive humidity, it is well, according to meteorological observations, to eschew extreme temperatures.

The equability of which I have spoken as a factor in the selection of a suitable domicile for atrophic conditions of the nares applies more to the equability of the *warmth* which I have already described. Coasts or islands washed by warm ocean currents are to be mentioned as possessors of equability. Truly all large bodies of water avert the rapid rise and fall of the temperature wave. It is needless for me to explain his phenomenon, but I should like to make an exception, and that is the great lakes of America, the confines of which are visited by most severe rises and falls of temperature in a short period of time. The direct cause of this, I think, is the plateau-like situation of these lakes, as this is not true of Salt Lake, which is a basinic region, though elevated at the same time some 4,000 feet.

In the "Transactions of the American Climatological Association" for the year 1890, Dr. A. C. Standart gives a statistical study of the climate of this region; and as a winter resort, for equability and bracing tone, a better selection would be difficult to make in cases of rhinitis cirrhotica. It is not cold enough to hinder outdoor exercise. Moreover, this degree of cold would act as a massage to the healthy tissue of a patient whose atrophy was of a low grade; but for bilateral cases with small area of healthy tissue in the nares, I prefer the southern oceanic treatment, either upon a suitable island or a sea voyage.

It is with some regret that I speak of sea voyages, knowing that there is not the desired facility. There are no planned voyages by steamers departing from any of our seaports for southern sea benefits, calling at stations of interest and salubrity, so that the only expedient is a sojourn upon one of the islands in the Atlantic Ocean, such as the Bermudas, Azores or Madeira Islands, combining equability and sedativeness.

The last qualities that are necessary considerations in the choice of selection are influences which bear upon the corporeal and mental faculties of the individual; they are sedativeness and stimulation. I have previously classed the variety of patients which improve best in climates possessed of one or other of these attributes. Sedativeness will be found in localities or resorts whose air is balmy, mild and bright, and whose elevation must not exceed 400 feet above the sea-level. As stated before, the following islands are unwavering examples of this character: The Bermudas, Azores or Madeira. Stimulation is found at high altitudes, ranging from 500 feet to a mile above sea-level. Of the resorts which combine equability and stimulation, I may mention Nice, Mentone, Cannes and Villefranche on the shores of the Mediterranean; but, by preference, according to many climatologists, the islands in this sea are superior—Capri, Malta, Majorca and Sardinia. In the Atlantic Ocean the Canary Islands are noted for their stimulating attribute, and in the Pacific mention may be made of Western Australia. The southern coast of California has an atmosphere the volume of which is equable and stimulating. The counties of that State bordering on the ocean are Santa Barbara, Ventura, Los Angeles and San Diego. All of these resorts have improved hostelries, and home comforts can be partaken of very liberally. Therefore the physician need not hesitate to give his patients contrary advice owing to lack of accommodations.

In conclusion, I wish to state that recently two cases of atrophic rhinitis of which I am familiar developed tuberculosis of the lungs. Therefore it appears to me that there must be fibroid changes in other organs, following the progress of the disease in the nose; or, while the destruction is active in the nasal organs, it is a suitable and favorable opportunity for the ingress of the tubercle bacillus. If this presumption cannot be refuted, then we have additional reason to treat this affection upon a climatic basis, both to prevent *this* result and to hasten the subsidence of the nasal lesion.

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SATURDAY, JANUARY 12, 1895.

EDITORIAL.

A FICTION OF FIGURES.

That "figures cannot lie" may be true, but the disability does not necessarily extend to the intelligence manipulating them. "Let us do the counting," said a partisan electoral board, "and we don't care who votes or how!"

However true statistic figures in the abstract may be, when regarded as members of an equation they are factors whose values depend entirely upon the positions they occupy in the equation. By selecting some and suppressing others of a group of correlated statistic items, a result the converse of truth may be given the appearance of mathematical demonstration. So common is this process that the paradoxical belief is that the "figures which will not lie" are the most notorious of prevaricators.

An example of the evolution of a falsehood by a process of artificial selection and carefully devised environment is found in the following clipping which has of late been going the rounds of scientific periodicals. It is one of those clips that pass as the right to work mischief by furthering wrong:

"The British Medical Association, wishing an exact statement of the influence of alcohol over the duration of life, charged a commission with the inquiry in three classes of subjects:

"1. Total abstainers.

"2. Moderate drinkers.

"3. Excessive drinkers.

"Observations included 4,234 cases of death in five categories of individuals; below is the average attained by each class:

"1. Abstainers—fifty-one years and one month.

"2. Moderate drinkers—sixty-three years and one-half month.

"3. Occasional drinkers—fifty-nine years and two months.

"4. Habitual drinkers—fifty-seven years and two months.

"5. Drunkards—fifty-three years and one-half month.

"The most advanced age is attained by moderate drinkers and the minimum by abstainers."

There is no reason to doubt the accuracy of these figures as separate items. The falsehood is in the segregation of these items, suppressing all correlative facts and declaring the result as the final solution of the general problem. It would be stultifying to entertain the possible accuracy of conclusions which subvert all facts accumulated from observation, experience and experiment, which contravene the data on which are founded the unsentimental business principles of life-insurance corporations, and which willfully misrepresent the scientific body under whose authority they claim authenticity.

The *British Medical Journal* gives the following explanation of these figures:

"The attempt to construe the statistics published by the Collective Investigating Committee of the British Medical Association as proving that intemperate drinkers live longer than teetotalers is quite unwarranted, and is in direct opposition to the conclusions of the reporters themselves as expressed in their report. Teetotalism, as they suggest, has only of late years been largely practiced in Britain, but drinking to excess has had great antiquity; therefore the average age of living abstainers must be less than the average age of the rest of the community. So that the average age at death of abstainers being 53 years as against 58 in the case of drunkards at death proves nothing against abstinence. The accuracy of this explanation is proved by other tables given in the report. When deaths under 30 years were excluded, the average age of the abstainers was about four years more than that of the decidedly intemperate. When deaths under 40 were excluded the average age of the teetotaler at death was more than five years greater than that of the intemperate. To guard against misrepresentation or misunderstanding, the committee expressly stated that the returns reported on afford *no means* of coming to any conclusion as to the relative duration of life of abstainers and 'habitually temperate drinkers;' that habitual indulgence in alcoholic liquors beyond the most moderate amounts has a distinct tendency to shorten life, the average shortening being roughly proportionate to the degree of indulgence; and that total abstinence and habitual temperance augment considerably the chance of death from old age and natural decay."

Shall We Quarrel With Our Neighbors?

It is unnecessary for us to adversely criticise our medical neighbors. Assured of our principles we need not contend with those who decry us, but can pursue our way without fear of successful antagonism. Honest differences of opinion should be discussed frankly and without passion. Inuendo and abuse are not argument. Life is short at most; days come and go and we pass away. Let us, then, not spend time in recrimination. He will succeed best who quietly pursues his calling, not finding too much fault with his neighbor; rather endeavoring to show his superiority by works than words. Your friends will fight your battles for you. Success in the treatment of your patients is the best ammunition you can furnish your adherents.—*Ec. Med. Jour.*

Blood-Serum in Surgery.

Dr. Schleich, of Berlin, regards desiccated pulverized and sterilized blood-serum as the best dusting powder for wounds and as the most unirritating vehicle for medicaments of all kinds. When applied to fresh wounds it forms a crust under which healing takes place, while in cases of moist eczema, burns, etc., it arrests the secretion. It may be mixed with water to form a paste, which is also an excellent vehicle for various drugs.—*Allg. Med. Central. Ztg.*

ABSTRACTS.

THE EFFECTS OF ALCOHOL ON THE ENGLISH MILITARY AND CIVIL POPULATION AT HOME AND ABROAD.

In an inaugural address before the Ulster Medical Society, November 2, 1894, Brigade-Surgeon F. E. M'Farland, A.M.D., said (Dublin *Jour. Med. Science*): There is one subject which bears more than any other on the health and well-being of the nation, and that is the drink question.

During twelve years' residence in India I had an opportunity of seeing its effects in that country. India is a remarkable country in many ways, and our tenure of it is one of the greatest miracles in history. How England, with a handful of men, many of them invalids, has been able to keep a population of much over 200,000,000, not in check but in absolute submission is the marvel. Now there are different ways of accounting for this. The population of India consists of Mussulmans and Hindoos, and if the English were out of India to-morrow these would be at war with each other, and the Mussulman would most likely prevail. Another reason is that though both races hate us as an alien race in their country they respect our laws; but another and perhaps the greatest reason that we hold India is—the two races, Mussulmans and Hindoos, are a sober people. Mahomet taught his people not to drink, as it made men mad; and Brahma and Buddha taught their followers not to touch strong drink, as it is an unclean thing. The result is, I may say, there is hardly any drunkenness among the natives of India, and an English lady might land at Bombay or Calcutta and travel to almost any part of India, and she would never meet with an insult or incivility, and that, not because they have a respect for women, for the reverse is the case, but because they are a sober people, and know that the matter would be reported and the offender would be detected and punished.

Some time since it was proposed to establish an "out still" system in India, which simply means public-houses under government license, with the object of raising revenue. My belief is that if this were done, and that drinking habits could be introduced among the natives, we could not hold the country a single year; it would become a perfect pandemonium.

I entered the army in the year 1858, and was at once sent to India, at the close of the Indian mutiny. At the close of a campaign discipline is apt to be a little relaxed; and certainly, in numerous cases, both officers and men had contracted drinking habits to a considerable extent. I have seen some of the most promising fellows in the service go shipwreck from strong drink. I was on the staff for one year, doing duty with various corps. The next year, 1859, I was gazetted to my first regiment. It was a distinguished regiment—had been to the Crimea and lost half of its men at Inkerman; but, like most other regiments at the time, it was a fine old drinking regiment too. There was no temperance society in it, and the colonel, who was the soul of honor, would not allow one, feeling that a man would be more demoralized by breaking his pledge than by drinking. In India, except in large cities like Calcutta or Bombay, there are no public-houses—the regimental canteen serves the purpose; but there are spirit merchants in every station.

There was a good deal of sickness in the regiment during a great part of the time I was with it, and many fatal cases, attributable to drink, especially among the non-commissioned officers. At this time there were two issues of rum in the day. Each issue, or tot, as it was called, was about 2½ ounces. In the days gone by there were four issues, the first at early dawn; and even the drum-boys were compelled to take their tot the same as the men. I returned to England in 1866, and during the eight years I remained at home my experience was that when men were in a large town or city like Woolwich or Belfast they drank, deserted and filled the hospital; but when they went into camp they were sober, well-conducted and healthy. In Aldershot—which is called a camp—there are enough

public-houses in all conscience. Every second house in the district is a beer-shop; but as there are no rich civilians foolish enough or weak enough to treat them, it is a case, as a soldier jauntily expressed it, "We calls for drink after drink, and seegar after seegar, as long as the blooming sixpence lasts." The government is wise in the payment of soldiers; they are paid in kind and not in cash, which would only be spent in drink.

In the year 1874 I returned to India, after an absence of eight years. A change had come over the spirit of the scene, and principally through the efforts of one man, the Rev. J. Gelson Gregson, the Father Mathew of India, I think the most remarkable man I ever met. To say that he traveled through every station in India is nothing—he did it two or three times a year. In the hot season, when it blew like a furnace; in the rainy season or the cold—all was the same to him: he went from station to station strengthening the temperance societies which he had organized in every regiment. Some commanding officers were favorable to those societies, some were not, more just tolerated them, but it mattered not to Gelson Gregson: he went on with his good work, and certainly I found a wonderful change since the time I was in India before. Not only were there a great number of teetotalers among the men, but there was a temperance element introduced into the service that never existed before, and this had spread to the whole Eurasian population, transforming them and improving them in every way. Mr. Gregson also introduced a form of pledge which, while it does not bind for a single day, is the one that is found to bind for life. It only binds a man while he keeps it in his possession. He can tear it up whenever he likes and be free from his obligation.

Also at this time, instead of two issues of rum only one was allowed, and in the last regiment I did duty with even this issue was divided into two. The canteen opened at a quarter to seven in the evening for the first half and at a quarter past seven for the second half. The canteen was again opened at eight o'clock, when a man could buy, at his own expense, a glass of spirits or a bottle of beer; but even this was productive of bad effects. Owing to the intense heat in the hot weather (and the hot season is very long) the men suffer from various affections and fevers, and from neurasthenia or nervous exhaustion generally. The result is that thirst is trying, and when in addition they take spirits at the canteen, the desire for more becomes almost imperative, and in too many cases it leads to men taking native drink. Many and curious are the ways the men adopt to obtain this poison, which is very deadly in its effects. I will not take up your time by describing the different kinds; all vary in strength according to the length of time they are allowed to ferment, and are a great cause of hepatic abscess and other illnesses. We hear a good deal in India of sunstroke, sometimes called heat apoplexy, insolatio or ardent fever, and that it is more common at night when men are in their beds than when out in the sun. My experience and that of others was that in too many cases the men had taken spirits largely before going to bed, and that, although they died of sunstroke, drink was the cause.

What is the state of things now in India? Lord Roberts crowned his splendid tour as commander-in-chief of India by wisely abolishing the rum ration entirely. We have now an army in India of about 75,000 men; of these 25,000, or one-third, are teetotalers, and a temperance element is developed through the whole army in India greater than ever before known.

Lord Wolseley says in a letter to the grand secretary Independent Order of Good Templars: "There are yet some great enemies to be encountered, some great battles to be fought by the United Kingdom, but at present the most pressing enemy is drink. It kills more than all our newest weapons of warfare, and not only detroys the body but the mind and soul also. All movements intended to meet this foe commend themselves to me, and no one can wish the Good Templars success more than I do. I am glad to say we have now but little drunkenness in the army—less of it in our ranks than in any other class of her majesty's subjects. To this fact I consider we owe much of the improvement in every respect that has been steadily going on among us for the last twenty years." These are the words of England's greatest general.

We tried large quantities of stimulants with our soldiers when we first acquired

India, and found the result was sickness, mortality and crime. Then we tried a smaller quantity with improvement, then smaller still with increased benefit, then no spirit ration at all, with the best results. We have the finest army we have ever had in India—sober, well conducted and healthy as an army can be in the climate which varies so much. One station may be healthy and the station next to it the reverse. I know temperance does not deserve all the credit for the improved condition of things. Sanitation, improved cooking, extra accommodation in hill stations—we have barracks for 14,000 now in the hills—but no one can deny that it is to the improvement in drinking habits principally that the great change is due.

Is alcohol food? If it be, it is a food we seem to get on very well without. This crucial question I am not going to solve; but, in the fewest words, put the matter before you. I may say there are two parties. One party believes that alcohol is neither assimilated nor changed, but is expelled as something foreign, by the kidneys, lungs and skin principally. The other party believes it undergoes combustion in the system, producing heat and force, but what the combination is they cannot tell us.

There are many kinds of alcohol, notably six—methylic, ethylic, propylic, butylic, amylic, capriolic—but it is with ethylic we have to do, C_2H_6O. The theory of Baron von Liebig was long believed, that the whole of the alcohol was consumed in the body; but French chemists—Lallemand, Perrin and Duray—performed a series of experiments in 1860 proving that alcohol was eliminated from the system unchanged. These experiments were performed by distillation and condensation, and by causing persons who had taken alcohol to breathe through a tube into a vessel containing bichromate of potassium and sulphuric acid in solution, and in such cases the color of the solution was changed from red to green, though no change took place when persons breathed through who had not taken alcohol. This seemed to settle the point, when the late Dr. Anstie performed a series of experiments, and he found that only a small portion of the alcohol was so eliminated and maintained that the remainder was consumed in the body, in a sense forming food. The late Professor Parkes, in his reply to him, said that, if a food, Dr. Anstie could not say whether it were a food for good or for evil. Richardson, in his Cantor lectures, admits that the whole of the alcohol drank is not recoverable, and suggests that probably it may have been converted into aldehyde, which by a process of oxidation is again disposed of within the body. I think we can leave this interesting question in the hands of the chemist, and with the proofs we can learn from our Indian army, and from the hundreds of thousands of our civil population at home who do not touch alcohol, we can say that if alcohol is food it is food for evil, and a food that we are better without. There are many excellent definitions of food given by eminent physicians and scientists; but plainly it comes to this, that food is that which produces bodily heat and forms tissue, and so force. That alcohol produces animal heat is disproved by Richardson, by a series of experiments on men, animals and birds. He shows that there are four stages in drunkenness. In the first, which is pleasurable, the heart is stimulated and quickened, the capillaries are dilated, there is a rush of blood toward the peripheries, with a very slight increase of heat, half to one degree; but he shows that this is really a cooling process, for the blood gets cooled at the surface of the body; and, in the second stage, sinks below normal; and, in the third stage as it approaches the fourth stage, the temperature becomes so low as to become dangerous, three or four degrees below normal. How alcohol forms tissue, except by causing fatty depositions, it is difficult to understand, as it does not contain nitrogen.

That alcohol is not a producer of heat is proved by experience. All arctic explorers give their evidence against it. All the men who took alcohol suffered more than those who did not—so much so, in most if not in every arctic expedition its use had to be discontinued.

The effects of alcohol on our civil population at home we find appalling. We spend about £140,000,000 on strong drink. To estimate the magnitude of this sum, we learn that it is more than the rental of all the houses and of all the farms in the United Kingdom. The rental of all the houses in the United Kingdom of England, Ireland and Scotland

is only £70,000,000, and of all the farms £60,000,000, making £130,000,000, and we drink £140,000,000. This is a fearful waste; but it does not end here. It is calculated that the country loses some £50,000,000 through the loss of labor—men not working their full time. Then there is some £30,000,000 expended in prosecutions for crime, legal expenses, prisons, poor-houses, lunatic asylums, and a hundred and one other results of intemperance. Another heavy loss which cannot be computed arises from the early deaths and sickness of workingmen in their prime. It may be said that we doctors have nothing to do with those matters; but we have everything to do with every matter which bears on the public health, and have as much to do with the prevention as with the cure of disease. Dr. Norman Kerr puts down 40,000 as the number who die annually in this country from strong drink *directly*, and about 60,000 who die *indirectly;* and these figures have been confirmed by the committee appointed by the British Medical Association and also by that appointed by the Harveian Society. Others consider these figures much too low and would certainly double them. And we ourselves know how many cases there are returned as pneumonia, liver, kidney, lung and heart diseases who have just drank themselves to death; but, in respect for the feelings of survivors, no mention is made about the drink, but the actual cause of death is sent to the Registrar-General.

The case of the drunkard is hopeless so long as he drinks. For him there is only one remedy, and that is, "Do not drink." He must not touch alcohol in any form if he wishes to save himself. But, unfortunately, the family of the drunkard suffers. Children require pure air, wholesome food and sufficient suitable clothing, and should have proper education. The children of the drinking artisan or workingman at night are often crowded in close, ill-ventilated rooms, breathing and rebreathing the same foul air—no more fruitful source for developing phthisis and struma; often little or no bedclothes, but huddled together for warmth. They are tea-fed and underfed. We can see them on the severest days barefooted and underclad, and we can tell the children of drinking parents from those of sober. Education is all very well if children are sent to school after a good breakfast and comfortably clad. And it is better that they should be barefooted than that they should be ill-shod and sit in wet shoes. But the drinking fathers and mothers care little so long as they can gratify their horrible craving for drink. People talk of the children of the poor being hardy. It is not so in towns and cities. The mortality is out of all proportion greater than that of the well-to-do classes. The only remedy is to remove or properly control the plague-spots of temptation—the public-houses. This can only be done by the mighty *vox populi*, quietly and lawfully and at the polls. Too long have the artisan and workingman paid their tribute at the expense of health, happiness, and everything that makes life worth living for, to enrich the publican and enable brewers and distillers to amass colossal fortunes.

Dr. Ringrose Atkins, a distinguished psychologist, microscopist and photographer, gave a most interesting lecture on the disastrous effects of alcohol on the vessels and nervous matter of the brain, exhibiting photos of sections of brains of alcoholics. I am not a profound pathologist, so will just quote Dr. Atkins' words. He considers in the early stages of alcoholism the most important and constant changes are "excessive nucleation of the vessels (arterioles), with consequent involvement of their coats and diminution in caliber of their lumina, and increase in the number of the neuroglia cells, both protoplasmic and fibrous, as Bevin Lewis and Andrietzen have pointed out. The nerve elements, both large and small cells, are affected in the later stages, undergoing either pigmentary or fatty degeneration, or shrinking and breaking up into molecular masses, with infiltration of nuclei." Dr. Atkins does not hold that these changes are special to alcoholism, or only found after its abuse. Nearly similar changes are found in other diseases and conditions of irritation, and the later changes are found in cases of chronic dementia, old standing paralysis, etc. Dr. B. W. Richardson, in his course of Cantor lectures, shows the action of alcohol on the blood if taken in sufficient quantity, by either fixing the water with the fibrin or extracting the fibrin, and so producing coagulation; on the red corpus-

cles by extracting water from them owing to the powerful affinity alcohol has for water, and in doing so altering their shape and course; also its effect on the vessels themselves. He shows especially how alcohol acts on the colloidal membranes—that the skin which covers us is colloidal, all organs and blood-vessels to their minutest ramifications, all organs, nerves, muscles and their fasciculi are sheathed with colloidal membrane, as well as the whole of the alimentary canal. It covers and penetrates the liver, kidneys and other solid organs. It not only supports the tissues and keeps the body in position, but it acts as a filter, and its efficiency depends upon a proper supply of water. He shows how alcohol acts on this membrane by robbing it of water and so producing thickening, shrinking and inactivity. In order that these membranes should work rapidly and equally they require at all times to be charged with water to saturation.

The effect of alcohol on the liver is first to cause congestion and then to shrink and contract the capsular membranous portion, so as to compress the vascular and cellular and so produce the hobnail liver in due time.

In the first stage of drunkenness an inordinate amount of arterial blood is sent to the brain; there is also dilatation of the capillaries; then comes the subsequent changes—there is venous congestion, and so in all the stages there is compression of nervous substance from disordered circulation.

From the effects of alcohol on the organs and tissues we can understand the different diseases it produces and develops. I need not speak of these.

The case, then, is that drunkenness is both a disease and a vice, and the question is, Where do these begin? One party says that moderate drinking is no vice; it only becomes a vice when a person exceeds. The other party says that moderate drinking is the vice that leads to excess, which becomes disease.

I am not going to touch on the drunkard's bodily ailments and diseases, but state that alcoholism is a disease characterized by many and peculiar psychological symptoms, of which loss of will-power, more or less complete, is one. It is computed there are 60,000 drunkards in the United Kingdom, and as many more qualifying for the position, and every one of these was recruited from the army of moderate drinkers, which is an item against moderate drinkers. No drunkard became so intentionally, but through loss of will-power and inability to resist the temptation. This inability may be hereditary or acquired. We have all seen instances of this. Alcoholism is both an insanity and a cause of insanity. Authorities vary very much as to the percentage of admissions into lunatic asylums from drink. The late Lord Shaftesbury, who was for fifty years on the Commission of Lunacy and for fourteen years its chairman, testified before a parliamentary commission that 50 per cent. was due to drink, and afterward stated that sixth-tenths were due to no other cause; the Thirty-ninth Report of the Commission in Lunacy put down 13.2, and many institutions vary. All authorities admit that a large number of admissions are from drink directly, but there is a worse phase—that a large number of lunatics are children of drunken parents. Some authorities put down one-half of the idiot class as such. There is a new school now that denies this, and says that acquired character cannot be transmitted to posterity. I cannot enter into this. At any rate, total abstinence is the safest and the only safe course. The inconvenience is very transient and the satisfaction very lasting.

It is by no means individuals of a low, vicious or brutal type, or the idle or those of a dull, inferior temperament who are usually the victims of strong drink. Often it is the young, the beautiful and the brave; the generous, the talented and the good. We should, therefore, treat habitual drunkards quite differently to the way we do. The habitual drunkard should not be let at large; he should be put into confinement, where he could pursue his trade or calling, or earn money in some way. A Norwegian gentleman in this city told me they used to have a law in his province of Norway that when a man was an habitual drunkard, any burgess could get another burgess to investigate the case—these burgesses were citizens sworn to maintain law and order and were men of character and of certain property-worth. These two witnesses, if they found that the man was an habitual drunkard and systematically neglected his family, could report him to an official

who was a kind of judge, and he then appointed two other citizens, independent of the two former and of each other, and on the evidence of the four the accused was without further trial put into prison for one year, and his family provided for by the State. The law worked well. I do not know if it is the same now; my friend has written to a lawyer in Norway to find out for me.

Alcohol is characterized by another symptom. Sometimes there is no depth of degradation to which the drunkard will not descend. I know of the case of a man of English blood who sold his two little girls to a Mussulman in a bazaar in India for a case of half a dozen bottles of brandy. But cases just as bad occur at home. You all know plenty of them. I need not dwell on the subject; it is part of the disease. There is a consensus of authorities who put down nine-tenths of all the crime in this country to alcohol. The late Baron Dowse, one of our Irish judges, said that drink was at the bottom of nearly every case he had to try, and that even in cases where it did not appear on the surface, yet, on investigation, he could nearly always trace them to drink. In the army, owing to the splendid discipline, practically there is no crime apart from drink.

But it is not at home only that we see the terrible effects of drink. We have, as Canon Farrar says, girdled the earth with a zone of drink. We send our sons to the colonies, and for one who succeeds how many go shipwreck because the spirit-seller is there before him. Our missionaries bring the Gospel to foreign lands, but in the same ship will be the spirit-seller or his wares to undo the work of the missionaries. Our missionaries complain that while the Mahometans make converts in great numbers, both in Asia and Africa, the heathen will not become Christians owing to their drinking customs. Mr. E. R. Barrett states that from 1883 to 1887 30,000,000 gallons of spirits were imported into Africa, and that an analysis of some of it proved it to be of a very poisonous quality; but what can one expect when a pint bottle sells at Sierra Leone at fourpence halfpenny? I do not mean to say that England is to blame for all this. I dare say other nations send spirits there too; but England boasts of her foregin missions, on which she spends £2,000,000, while she spends £140,000,000 in drink. I think the poor heathen get more strong drink than Gospel from us.

This is a matter that concerns ourselves very nearly. Many of our young members who have attained their profession at great labor and expense, who have not means or patience to settle down in the better-class neighborhoods, elect to practice in the populous working districts—many of these gentlemen do an amount of work that should be remunerated by £600 or £800 a year, and do not get one-half, because the money goes to the publicans. The late Sir Andrew Clark once stated—"He was often tempted to give up his profession and join in a crusade against strong drink." Medical men are often blamed for ordering drink, and perhaps we sometimes deserve it; but we must take cases as we find them, and a physician's hand should not be bound in the slightest. At the same time, my own belief is that if we had no such liquors as whisky, gin, rum or brandy, but a recognized standard solution of alcohol, labeled alcohol poison and placed on the chemist's shelf, it would answer all requirements and be very little used. However, my case is not against alcohol as a medicine but as a diet. Sir Wm. Jenner struck the right note when he said, "There are times in the crisis of disease, as in the life of a man, when alcohol is useful; but it is as the whip and spur are to the race-horse, it tides over a difficulty by enabling him to put on a spurt, but is in no wise hay and oats."

We come now to the treatment of this disease. Much might be done by the women. If the homes of the artisan and workingman were made more comfortable and attractive, and if the cooking was better, he would not be so fond of the public-house. Man is a docile animal and easily domesticated.

It has often been said that we cannot make a man sober by act of Parliament, but the saying is untrue. Experience has proven that just in proportion as temptation is put in a man's way or out of a man's way does he become drunken or sober.

The grocer's spirit license has done much harm, especially to women. It had already made many of them inebriatess women, especially, should not be expose; to temptation. There are times of physi-

cal weakness which render them an easy prey to drink when once the habit is formed. Women who formerly would not be seen in a public-house cannot now buy their necessaries without being exposed to temptation. The downfall with them is very rapid and the outlook for the children very bad. This law should be repealed.

Finally, there are the two large projects for controlling the trade before the country: The permissive or local veto bill and the Bishop of Chester's scheme on the Gothenburg and Bergen lines. Both have their advocates. Time will not permit me to go into these. I have just touched upon some of the salient points of this great drink question. Some points I have not alluded to—as the insurance aspect, expectation of life, and many others.

This great work—the control of the drink traffic—will proceed. Are we as a profession to be in the van or wake of the movement? In this society there is a large percentage of total abstainers. Others do not see it in exactly the same light as we do, but of one thing I am certain—there is not a single member who would not receive with joy and satisfaction any movement that would emancipate the artisan and workingman from the bondage of strong drink.

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of November 28, 1894.

Dr. Robert T. Morris, of New York, by invitation of the Board of Directors, presented

I. DEMONSTRATION OF A MECHANISM OF INTUSSUSCEPTION. II. EXHIBITION OF SPECIMENS ILLUSTRATING EACH STEP IN THE PROGRESS OF INFECTIVE APPENDICITIS.

(See page 45.)

DISCUSSION.

DR. JOHN ASHHURST, JR.: I have listened with a great deal of pleasure to the description of Dr. Morris' specimens, and there are some points that have particularly interested me. What Dr. Morris said with regard to the occurrence of inflammation of the appendix followed by gangrene from pressure, the appendix being a narrow tube, and therefore not able to bear great distention with impunity, is paralleled by what is seen in other parts of the body. We see it in some cases of felon, where the tension becomes very great from the "temporary hypertrophy," as it was called by Virchow. When such a finger is opened, no pus and but little blood may escape, but the whole finger may be apparently packed with dead or dying tissue. This also is an instance of necrosis from tension, due to excessive inflammation where there is no chance for expansion. I have seen the same thing in the testis, where necrosis of a considerable portion of the gland may take place from the firm tunica albuginea preventing expansion of the inflamed organ.

I was also interested in the specimens showing obliteration of the lumen of the appendix. I have seen such specimens. Several weeks ago I removed the appendix of a young lady who for many years had suffered from recurrent attacks of appendicitis, and between the attacks had curious symptoms, referred to the digestive system, which I think were explained by the condition which was found at the operation. In this case the appendix was so much reduced in size that it was with great difficulty it was discovered. It was simply a fibrous band surrounded by serous membrane. No mucous membrane could be seen except a little pouch near its junction with the cæcum.

I was interested in what was said with regard to the causation of reflex symptoms, such as interference with the function of the bowel, which was explained by

a condition of local neuritis. In the case to which I have just referred, the patient had suffered for years with almost continual nausea, though without vomiting. Never did she take a meal without suffering with nausea for hours afterward. I think that the digestive symptoms were explained by the presence of adhesions. The cæcum was closely adherent to the abdominal wall, and it is easy to understand that under such circumstances the nerves of the part would be seriously pressed upon, and neuritis might follow. We find an analogy to this in cases of Littre's and Richter's hernia, where a diverticulum of the bowel, or a small portion of the intestine, is caught in a hernial opening. In such cases there may be grave symptoms of strangulated hernia, though only a small portion of the lumen of the bowel is involved.

Dr. Morris referred to the presence of worms in the appendix. Last winter I operated on a case of acute appendicitis in which, after evacuating a quantity of pus, I saw what I supposed to be an unusually long appendix, but on bringing it out it proved to be a lumbricoid worm loose in the peritoneal cavity, the explanation of its presence being, of course, that it had escaped through a perforation.

Last Saturday I operated on a patient who had been operated on in Brooklyn four years ago for appendicitis, and who supposed that his appendix had been removed. Two years after the first operation the cicatrix had reopened and had discharged a small quantity of pus, and since then a fistula had remained. When he came under my care I advised that the cicatrix should be divided and the part explored, thinking that possibly a silk ligature might be keeping up the discharge. On making an incision, the finger at once entered the abdominal cavity, and I felt a full sized appendix. The case evidently had been one where the surgeon had opened an abscess and very judiciously, in all probability, had not pushed the investigation further. I believe that in many cases of acute appendicitis the safety of the patient depends upon not making too minute an exploration. If the appendix is not readily found it may be permitted to remain. In this case I removed the appendix in the ordinary way, and found it partially obliterated. There were two diaphragms, as it were, making pouches, and in one of these was a pin-hole perforation. The lesson taught by this case is that when it is possible to remove the appendix without too much disturbance, it should be done; but, as I have just said, I believe that there are cases where the line of safety for the patient rests in not making too minute an investigation, and, if the appendix cannot be readily found, in leaving it, and simply evacuating the pus.

Dr. James C. Wilson: Dr. Morris has rather thrown out some suggestive hints with reference to the pathology of appendicitis than gone thoroughly into the discussion of any particular branch of this wide and complex field of surgical pathology. I should have been glad if he had been able to have more fully given us his views in regard to this affection.

I am particularly impressed with what has been said in regard to the remote changes and with the explanation which has been suggested for some of the chronic and troublesome intestinal disturbances which have been so unaccountable in their pathology. I think that we have all been puzzled and have been unable to explain or relieve many cases which probably come within this group of chronic appendicitis, with nerve changes, adhesions and permanent foci of infection, giving rise to persistent disturbance not yielding to treatment. I have had many such cases, which have been classified under the head of chronic intestinal indigestion with nervous symptoms. The difficulty which I find with cases of this kind is to induce them to subject themselves to a surgical operation. In one such case of long standing ill-health, in which Dr. Deaver was associated with me, a diseased appendix was found, and after some months the patient reports that she is greatly improved and has regained her health.

Dr. John H. Musser: I have been particularly interested in the suggestion thrown out by Dr. Morris with reference to the degree of virulence of the symptoms depending upon the character of the infection; that where high fever is an initial symptom the probability is that there is infection with the streptococcus, a form of infection which we know very well is not likely to yield to treatment. We also know that the possibilities of more remote infection are greater, and the liability to

infection of the peritoneum infinitely greater. If in this way we can determine the character of the infection we shall be more guarded in our prognosis and in our treatment. I take it that cases of severe streptococcus infection should be treated early by operation.

I was also interested in noting that in the pathology of appendicitis we see that there are two causes for the symptoms, the one mechanical and the other the septic process, the septic process being responsible for the temperature, the mechanical process being responsible for the pain, for the reflex vomiting, and likewise for the occurrence of further pathological changes, such as gangrene. The specimens readily demonstrate that it is impossible to tell whether or not gangrene is going to take place. We cannot tell from the local symptoms or from the fever whether or not there is going to be perforation. As we well know, some of the simplest cases so far as symptoms are concerned often result in gangrene, and cases may be discharged apparently convalescent when gangrene is going on. I have seen cases operated on at the end of a week or ten days, and there was found gangrene, the presence of which the earlier symptoms had given no indication.

In analogy with streptococcus infection under other circumstances we notice here the tendency to recurrence and the tendency to infection of other tissues. I would ask Dr. Morris if the cases of recurring appendicitis are not largely of streptococcus origin. I have had a case of this nature. If this is the case it is another argument in favor of resort to operation in these recurring cases.

I have had several opportunities to see cases of chronic intestinal disturbance due to continuous infection from the appendix, and the removal of this small focus of infection has proven of the greatest value, resulting, indeed, in the cure of the patient.

Dr. Ernest Laplace: I have been especially interested in the remarks with reference to the relation between the nature of the infection and the temperature. It would be very well, indeed, if such a relation could be established, but I take it that is entirely vain. Even if we were prepared to say that in appendicitis there were only two forms of infection, that by the streptococcus and that by the common colon bacillus, I would be prepared to say that there would be no two patients in whom the reaction to these points would be exactly the same, and that there are some systems on which the ptomaines of the streptococcus have very little irritating effect and produce very little elevation of temperature, and therefore the temperature at no time is a real index of the severity of the case.

Another point was the relation of intestinal symptoms—intestinal atony to the possible degree of nerve fixation by fibrous tissue resulting from chronic inflammation. I am sorry that Dr. Morris did not tell us the results obtained in the cases referred to. My experience in the removal of scar tissue not only from this part but from other regions, and especially where serous membranes are involved, is that the reproduction of scar tissue is as rapid as before, and I should doubt the wisdom of disturbing strong fibrous adhesions, which merely result in a little nerve disturbance in the intestine, in order to relieve that condition. We all know that once nature has done the work for us, we should respect that work, because she has done it better than we could. If we remove this fibrous tissue we leave a surface which must granulate and form new fibrous tissue, and the result is the same as before, the same nerves are apt to be affected, and the patient is as bad off, plus the danger of the operation.

The specimens show that Dr. Morris has gone deeply into the philosophy of the subject, and the points brought out in the surgical pathology of this affection are interesting and solve many points which have been problems with me.

Dr. John B. Roberts: I should like Dr. Morris in closing the discussion to tell us what evidence he has that neuritis exists in the cases mentioned. The doctor has not gone into the subject of the operative surgery, but has confined himself to the portion which is the more important at this time, namely, the pathology. I would be glad to have him tell us whether in his operative work he goes upon this principle of a possible neuritis and secondary digestive trouble due to the retention and binding down of the appendix. Does he always make a search for the appendix in the primary opera-

tion, even where there is a great deal of pus, or does he evacuate the pus and wait for a subsequent period to remove the appendix? I would also ask if in operations where a short stump has been left he has seen evidences of digestive trouble from fibrous contraction, or whether neurotic symptoms are found only in cases cured by nature?

DR. JOHN B. DEAVER: There are only one or two points to which I shall refer. The first is the separation of the appendix, to which Dr. Morris has referred, where we find the stump and then the tip of the organ at some little distance. I have met with a similar condition where the tip of the appendix was the source of the infection. In one of these cases the tip laid behind the colon and contained an abscess.

The pain in chronic appendicitis I have no doubt is due to neuritis in certain cases. I also believe that it is due to traction made on the adhesions. I think that this is particularly true after operations where we are called upon to remove stumps, and it should make us more careful in treating stumps. Where it can be done the stump should be invaginated and the serous coat of the cæcum stitched over it. The nerves reach the appendix through the mesappendix, and where the mesappendix is not greatly infiltrated we should eliminate the element of neuritis and look for some other explanation. I believe, therefore, that in these operations followed by severe pain, which is referred to the right iliac region and aggravated by certain motions of the body, it is warrantable to reopen and examine the stump of the appendix, if we can find no other explanation for the pain.

Gangrene of the mesappendix I have seen in a certain number of cases. In one such case the mesappendix was gangrenous, while the appendix was practically intact, the operation being done very early. I might mention a case of abscess of the appendix. This man had but few symptoms either general or local. It was suggested to him that he had appendicitis, and he at once agreed to operation. The appendix was perforated at its mid-point in the line between the two layers of the mesappendix, making the abscess, which contained half a dram of pus, extra-peritoneal.

With regard to streptococcus and colon-bacillus infection, I believe that the streptococcus is the more virulent, and I believe also that this plays a *rôle* in certain of the cases with high temperature. It is not the cases with high temperature that I fear. It is the cases with moderate fever that are apt to deceive us. I place little reliance on the temperature, but am governed by the local condition, the presence of peritonitis, and by progressive invasion of the peritoneal cavity.

The results of operation, so far as my experience goes, have been very satisfactory. I have not found reflex disturbance follow removal of the appendix where I was to dispose of the stump in the ideal way. Where this has not been possible, on account of dense adhesions, or on account of the fear of breaking down the limiting wall which nature had thrown out, I have seen pain follow which in some cases was subsequently demonstrated to be due to adhesions.

DR. G. G. DAVIS: I would ask Dr. Morris what is his view as to the relation which infection bears to appendicitis? In other words, if there is one form termed infective, what other inflammations of the appendix are there? Infection has been said to be a cause of intestinal catarrh. May the process also be a reversed one? Does the doctor recognize such a thing as a catarrhal process being a cause of appendicitis?

DR. M. PRICE: I should have liked if Dr. Morris had taken up more than the pathology, as those of us who are doing operative work care very little about the pathology of appendicitis; we care more about the condition found at the time of operation. I recognize two entirely different conditions with which we have to deal, one where the bowels are confined and it is impossible to move them, and the other where the bowels can be readily moved. These conditions are to be dealt with differently, although both are from the same original cause.

As regards temperature: in 23 abdominal sections for appendicitis, with 19 consecutive recoveries, I have never seen but one case where the temperature was below normal. In looking over the report of Dr. Keen's cases, in a paper in 1891, I note that in two-thirds of them the temperature was below normal. I notice the same thing in the reports of other operators; the temperature is below normal at

the time that the case comes into the hands of the operator. Of course, in the cases that come into my hands, the disease had existed from twenty-four hours to three or four days, and there has been time for pus to form.

There is no question that there are nervous symptoms caused by pressure upon nerves. This is sometimes seen after amputations where resection of the nerve may subsequently be required. I have seen it beautifully illustrated in a case recently in Dr. Joseph Price's hospital. The patient was unable to walk when admitted. Both appendages were removed, it was supposed close to the uterus. It was a dirty case, requiring drainage. After recovery she still complained of pain in the right iliac fossa. On reopening and excising the right stump it was found that the ligature had not been encapsulated, and four or five drops of pus were in the stump. This was removed and the part curetted, and in six weeks the patient could walk as well as any one.

I know that Dr. Morris believes in clean surgery and in complete surgery, and I would ask if he would be willing to leave in the pelvis such a mass as Dr. Laplace refers to, and hope for perfect results. I do not see where Dr. Laplace gets his data when he says that the same fibrous condition exists after you have removed the offending cause.

I would ask Dr. Morris in regard to the mortality, in view of the fact that in the Johns Hopkins Hospital they have had eight deaths in nine operations. Christian Fenger reports eleven consecutive deaths in appendicitis operations. I believe that all these cases ought to get well unless they are practically dead at the time of operation. The radical men who believe in surgery are to-day saving nine out of ten of the cases that formerly died. I believe that the reason of the deaths is that complete operations are not done. I agree with Dr. Ashhurst, that if the bowels are soluble and there is an abscess, the only thing to do is to open and drain, because the patient will get well. I believe that all deaths after operation are due to bad judgment or to bad surgery —the man either operates on a dying patient or he does bad surgery.

Dr. Joseph Hoffman: I think that it takes only a few such specimens as have been shown to convince us that appendicitis is naturally a surgical disease. Clinicians generally consider this affection in the light that they formerly regarded tubal and ovarian troubles, but when specimens began to be circulated and the condition of the tubes to be seen, the propriety of operation was no longer a question, and it was acknowledged to be distinctly a branch of surgical work. There is a parallel between the tube and the appendix, and the pathology of the appendix is the same as in the Fallopian tube.

I always smile when I hear about this wonderful power of nature, for much of our surgery is done to cure the failures of nature, and this is particularly true in the case of the appendix. The conditions about the head of the colon are such as we would not tolerate in any other portion of the body. If they were in the duodenum the surgeon would at once interfere. Why should it be allowed to remain in one place and removed in another?

We know the reflex troubles that adhesions of the tubes and ovaries may cause. We may have any number of reflex symptoms. These same conditions are found in appendicitis. If adhesions of the bowel will cause trouble in the neighborhood of the duodenum they will also in the region of the cæcum. It is no more surgical sense to leave them in one place than in another.

Dr. W. Easterly Ashton: The theory that every case of appendicitis is an infectious case is a long step toward a knowledge of its pathology. No matter what may be the exciting causes, all these inflammations must be accepted as due to infection. The appendix is normally occupied with feces in a more or less fluid state, and it must therefore contain bacteria, so that any existing cause of inflammation must at once be followed by infection. It has been demonstrated that it is not necessary to have perforation, or even ulceration, of the wall of the appendix or intestine to permit migration of bacteria. This has been shown by constricting the intestine of a rabbit with a rubber band, when, as soon as stasis is produced, bacteria migrate. It has been further shown that these bacteria under normal conditions produce no trouble, but when there is any interference with the circulation of the appendix, or any want of integrity in its wall, these bacteria not only penetrate the tissue, but perforate the wall com-

pletely and escape into the peritoneal cavity. All of these cases, no matter how mild, are infectious. The fact that the appendix is a rudimentary and unused organ is a constant predisposing cause to attacks of inflammation, for we know that the retrograde changes occurring in an unused organ make it especially susceptible to inflammatory attacks.

Again, the anatomical position of the organ renders it liable to dragging and strangulation. Situated as it is at the head of the colon, with a small mesappendix and a single arterial supply, distention of the large bowel or ileum will drag upon the appendix and induce nutritive changes favoring the migration of bacteria.

I believe in time all of us will agree that in appendicitis we are dealing with a septic affection, and when we do agree to this, then the knife will be used in all cases so soon as the diagnosis is clear, whether the case is an acute or chronic one.

THE PRESIDENT, DR. DE FOREST WILLARD: I would ask Dr. Morris how long he thinks it necessary that the septic process should exist before we may have secondary abscesses. This question came up in the Pathological Society on the presentation of the specimen of abscess of the liver which has been shown to-night. It was held by some that the abscess of the liver was probably not due to the diseased appendix, because it occurred within five days of the appendix trouble. I have seen three cases in which secondary abscess occurred within three days.

That these cases of appendicitis are infectious has been demonstrated by the large number of specimens shown to-night.

DR. MORRIS, of New York City: It is not safe to assume that any particular case of chronic intestinal indigestion is due to the appendix, unless on palpation we can determine that the appendix is probably the center from which the trouble proceeds. In most patients it is not difficult to palpate the appendix. I do not know what proportion of cases of intestinal indigestion is due to chronic infection of the appendix, but I know that some are, and these should be subjected to proper treatment, which I believe to be surgical.

With regard to temperature, as I have stated, my impression is that high temperature at the outset usually occurs with mixed infection or streptococcus infection. I think that the results of such infection are apt to be confined to the vicinity of the appendix for the first few days. With the insidious infection with the colon bacillus we are apt to have a temperature of 100° with a pulse of 120. Such a condition is more serious than a temperature of 105° with a pulse of 120. When the vital signs fall apart, look out. The general practitioner cannot tell *à priori* whether a patient is to be entirely well or entirely dead in three days from the beginning of any attack of appendicitis. This cannot be determined in advance, because the extent of the invasion of infection in any given case is not to be estimated. Our surgery has been making progress. If we cannot show physicians by our surgery and our statistics that these cases ought to be operated on, we should not operate. I believe that to-day, however, we have an almost perfect operative technique in dealing with most forms of appendicitis.

Dr. Laplace believes that no two patients will react alike to the same infection. I also believe that, but if the temperature is high we are apt to have a mixed infection or infection with streptococci. That I have determined by cultures from those cases where the temperature was high. All of the points brought forward to-night were pretty well proven by my work before being presented.

Dr. Roberts asked in regard to the evidence of neuritis. This was found in the direct examination of the nerves. These specimens have been examined by my pathologists and the evidences of sclerosis found. I have had one case when I operated for a stump that had been left. The patient suffered with neuritis, chronic constipation and digestive disturbances, and had been an invalid for a long while. I removed the stump, and the patient made an excellent recovery. The bowels move regularly; he is free from pain and has gained in weight. Another gentleman was compelled to give up his work as a professor on account of irritation in the fibrous remains of an appendix. This was removed, and he returned to his normal condition. A physician who had been a nervous, dyspeptic individual for many years came to me with an appendix which had lost much of its structure. It contained a few fibers of sclerosed nerves. We removed this appendix and

separated the adhesions, and he is now a completely changed man. I could enumerate other cases.

I have avoided the question of operation because it is such a large one. As regards my own statistics at present, I feel inclined not to quote them, for it would savor of boasting. I may say that in a pretty large number of cases operated on while infection was limited to the appendix, and in the interval between acute attacks, I have had no deaths and nothing which seemed to point to a bad result. I cannot look forward to death in a case of this sort. Surgeons have developed an operation which is less to be feared than a single attack of appendicitis.

I have never seen catarrhal appendicitis. I have operated in cases where this diagnosis has been made, but I have never seen the affection. There is no doubt that catarrhal inflammation of the mucous membrane may occur, but I doubt if it ever gives rise to symptoms.

I believe with Dr. Price, that it is better to do a pretty radical operation where we start in to remove the infected mass. I do not feel like leaving such a mass after having looked at it. My statistics, which will be published before long, will give an analysis of my results. We save most of our badly infected cases to-day. Cases in which I think a short time ago my mortality rate would have been 50 per cent., I believe will now give a mortality of less than 10 per cent. These are the cases with pus, wide infection and peritonitis.

As Dr. Ashton has said, bacteria may be present and no trouble arise until an infection atrium occurs, when the bacteria at once migrate. This may be caused in various ways; for instance, dislocation of an appendix from its particular position is very common. The individual may be struck by the elbow of a friend, or in certain manipulations the appendix may be displaced. It may not go back to its original position; it may be twisted on its mesappendix. Its contents are locked in and there may be a little discomfort, lasting a few hours. All at once bacteria begin to migrate because the mucosa has undergone necrosis from twist pressure. This dislocation of the appendix is very common, and is usually a matter of no importance to the patient. I also believe, as Dr. Ashton has said, that the appendix is more readily attacked by bacteria because it is a rudimentary structure, just as some wisdom teeth are more liable to decay on this account.

As to the length of time between the beginning of infection and the occurrence of liver abscess, I cannot say. I can only say this, that within forty-eight hours of the beginning of an attack of appendicitis I have found thrombi in the veins of the mesappendix which could have caused the beginning of a liver abscess on that day. I do not see why we might not have abscess of the liver within two or three days of the beginning of an attack of appendicitis.

Kerosene in Alcoholism:

The most recent remedy for alcoholism in Russia is petroleum or paraffin oil, to which the notice of the St. Petersburg medical authorities was called by accident. It appears that a laboring man who had been drinking heavily for four days and nights entered, in a complete state of intoxication, a grocer's shop. Unnoticed by the shopkeeper, he staggered up to an open cask of petroleum and began drinking from it. It is related that the petroleum cured him of all the effects of over-drinking; the nausea, unsteadiness of gait and headache disappeared as if by magic.—*N. Y. Med. Times.*

Thioform.

Thioform, a chemical combination of bismuth, sulphur and salicylic acid, has been brought forward as a substitute for iodoform. It is a tasteless and odorless powder of a greenish-yellow color. When used as a dressing for ulcers, wounds, burns, etc., thioform has shown itself to be equal, if not superior, to iodoform. However, the specific action of iodoform in tuberculous affections could not be expected from the use of thioform, as the latter does not contain iodine. Finally, thioform has been used internally in doses of fifteen grains. Its action was similar, but superior, to bismuth salicylate.—*Texas Courier Record.*

Ice (*N. Y. Med. Times*) applied to the external genitals (the scrotum in men and the labia majora in women) controls epistaxis and hæmoptysis.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE ANNALS OF GYNÆCOLOGY AND PÆDIATRY

for October. Dr. A. Van DerVeer, of Albany, N. Y., contributes a

Report in Abdominal Surgery,

being an analysis of one hundred and forty-five cases done upon the ovaries and uterine appendages, with special remarks as to preparation of the patient, place of operation, use of drainage, treatment and results. In the series of cases there have been seventeen deaths, in one of which the autopsy revealed the pelvis and abdominal cavity full of clots, some undergoing septic change, but no pus present, nor had there been any evidence of distention of the abdomen or any condition to indicate true peritonitis. Death had occurred on the fourteenth day, with no serious symptom presenting at any time, excepting a rapid pulse for a period of nearly three days previous to death. On careful examination of the pedicle the ligature had evidently slipped, and the author regrets that a drainage-tube was not used in this case, as in that way the hemorrhage would have been detected. The operation was for simple uncomplicated ovarian cyst.

The author emphasizes the importance of regulating the bowels and proper attention to such diet as does not constipate previous to operation. He also lays stress upon a careful examination of the urine. The previous habit of the patient in regard to the use of morphia should be carefully inquired into, and is not a contraindication to operation, but the same will necessarily be needed after and without fear in giving as full doses may be required to control pain. In regard to the preparation of the operating-room, the author states that he has long since given up the use of the carbolic spray and relies upon strict cleanliness, washing all woodwork, walls and floors with bichloride solution. A large proportion of the cases reported were operated upon in the amphitheater of the Albany Hospital, and some in the presence of one hundred and fifty or more students. The author emphasizes the importance of a short incision.

He is a firm believer in the drainage-tube. In regard to suture material he prefers silkworm gut, and states that with this he seldom has a stitch-hole abscess. As to the time of removing the stitches, it is well if the superficial ones are removed at the end of the second day or during the first dressing of the wound, and then the deep ones are best left until about the tenth day. They do no harm and certainly help to keep the abdominal incision in more perfect apposition. In conditions of continued oozing from adhesions, and where the abdominal walls have been greatly stretched by the size of the tumor, he has seen in two of his cases a most happy result from folding the abdominal wall over, having previously put in through-and-through sutures of silkworm gut, taking them out at the end of forty-eight hours.

As to the dressing of the wound, he has uniformly employed the powdered iodoform, then the iodoform gauze, with the Gamgee pads and flannel bandage, doing the first dressing at the end of forty-eight hours, removing what is usually but soiled iodoform gauze, reapplying the second dressing and letting it remain until the wound is healed, except in cases where the drainage-tube may have produced some soiling.

In those cases where the stump seemed to flatten out over the ligature the author brings the peritoneal surfaces together with two or three interrupted sutures of fine silk, and believes that this has some effect in obviating intestinal obstruction due to a coil of bowel becoming adherent to the stump of the pedicle.

As to the pulse and temperature, he is satisfied that the former is of far more importance than the taking of the latter. The heart's action plainly tells of serious trouble going on in the way of intestinal obstruction or of either form of peritonitis, while there are many conditions, really non-essential to the recovery of the patient, that will cause an increase in temperature apparently alarming.

The author enters a vigorous plea against tinkering and deferring surgical advice till too late.

C. C. Frederick, M.D., Adjunct Professor of Obstetrics, Medical Department Niagara University, Buffalo, N. Y., discusses

The Relations of Renal Insufficiency to Operations.

He draws the following conclusions:

1. Every patient's urine should be examined quantitatively and qualitatively before operation if possible.

2. Minor degrees of renal insufficiency and minor degrees of renal lesions are not contraindications to operations.

3. The graver forms of renal disease are contraindications to operation except it be for disease or growths which have a causal relation to the kidney disease.

4. Patients are more liable to shock and slow convalescence after operation when suffering from kidney disease.

5. Patients may develop acute renal congestion *de novo* after operation and are especially liable to do so if there have been old lesions.

6. That there seems to be little choice between chloroform and ether as the anæsthetic in renal insufficiency, both alike producing congestion.

William B. Dewees, A.M., M.D., of Saline, Kan., contributes an article on

The Care of Pregnant Women.

The author believes that the next advance in obstetrical science will be the bringing home to the general practitioner of the fact that the diseases peculiar to women during pregnancy and parturition are very largely preventable. The paramount duties of the obstetrician in the study and care of pregnant women may be classified as follows:

1. To discover if the patient be actually pregnant

2. To determine positively if the impregnation be uterine or normal as contradistinguished from tubal, abdominal and abnormal pregnancy.

3. To carefully note the pregnant woman's history, including her age, primiparity or multiparity, environments, station in life, general condition of health, period of gestation, as well as her dress, food, drink and habits of life. To make repeated examinations of the urine and ascertain the temperature from the time pregnancy is established to the termination of gestation.

4. To make a physical examination for the purpose of accurately determining the diameters of the pelvic straits; the symmetry and size of the bony outlet; the integrity, condition and position of the vagina, uterus and other intrapelvic viscera and adjacent structures; the state of the abdominal muscles; the presence or absence of hernia, varicose veins, tumors, etc.; the shape, size and condition of the breasts and nipples; the condition of the heart, lungs, mind, stomach, bowels, etc.

5. To observe the state of the fœtus, its strength and viability, as well as the implantation of the placenta.

The physician should insist upon the following on the part of his patient:

1. Absolute, regular hours and wholesome environments.

2. Plain but nutritious and wholesome food and drink, being principally composed of fresh lean meats, fresh fruits, pure milk and distilled water.

3. A proper amount of exercise, by walking or light labor on foot, and maintaining the correct erect posture. Whenever infirmity forbids such exercise, recourse should be had to massage, and as much time passed in the open air as is advisable under such unfortunate circumstances. Rest in the recumbent posture after meals and fatiguing efforts, with not less than ten hours' sleep out of every twenty-four.

4. An open condition of the bowels and skin, which is to be chiefly maintained by proper diet, exercise and bathing, the wearing of flannels, warm low-heeled shoes and loose garments, and in rare cases the proper use of laxatives and hot-water enemas.

The author believes that the term puerperal fever should be expunged from medical literature and be replaced by the proper term, parturial sepsis.

In regard to ectopic pregnancy, the author considers that there is but one method of treatment—abdominal section and the removal of the product of gestation so soon as the condition is discovered.

Where there exists a contracted pelvis he believes that the life of the fœtus should not be sacrificed, but the gestation allowed to go on to term and the woman delivered by Cæsarean section or symphyseotomy. It is the duty of the obstetrician, therefore, to familiarize himself thoroughly with the indications as well as the technique of both these operations, neither of which is to be lightly undertaken by any one who does not possess the requisite skill both in the obstetric art and abdominal surgery.

In dealing with placenta previa at term the writer prefers to bring the head down at once with the forceps, tamponing the uterus by this means. He prefers the use of the forceps to the hand. As soon as the diagnosis is established action must be prompt in evacuating the uterine contents. Hemorrhage is the danger signal. When this occurs prior to the sixth month we should proceed without any regard to the life of the child. After this time we should proceed as promptly, but with all possible endeavor to save the lives of the mother and child. The cervix should be dilated with the fingers made antiseptic and with the patient under anæsthesia until there is sufficient dilatation for the application of the forceps. When the dilatation is greater and the position abnormal or less favorable the accoucheur had better resort to the passing of the hand and turning by Braxton-Hicks method and drawing the child into the cervix, and thus arrest the hemorrhage.

Should Antiseptic Vaginal Douching be Made a Routine Practice During the Puerperium?

is the title of a paper by Adam H. Wright, M.D., of Toronto. The author is opposed to its use for the following reasons:

1. Douching disturbs that perfect quiet and rest which are so desirable for a patient after labor. He does not refer to surgical rest of the wounded tissues, but to rest in a general way, which is so delicious to a weary and more or less exhausted woman.

2. Douching is unscientific on surgical grounds. After labor the utero-vaginal canal is bruised and wounded. On surgical principles the most important points in the treatment are rest, position, pressure and drainage. The wounds of the cervix and vagina are, as a rule, kept closed by the elastic and even pressure of the surrounding tissues. The introduction of suppositories and douching seriously interferes with rest and pressure and, in the author's opinion, materially delays the healing of those wounds. The recumbent posture, with the slight changes in position required for voiding urine and fæces, is well adapted for drainage.

3. Douching does not lessen the dangers accruing from the presence of bacteria in the vagina, since vaginal antiseptic injections may change the normal acidity of the secretions and thus chemically lessen the resistance of the tissues to bacteria.

4. Douching is actually dangerous. It is apt to disturb clots and thus open avenues

for infection; to open lacerations of the cervix and vagina and thus prevent them from healing; to wash bacteria into the uterine cavity and thus cause septic endometritis. Among other dangers which are generally due to accident or carelessness are the introduction of septic matter by fingers or instruments.

The author is strongly impressed with the opinion that the use of the douche does sometimes, if not frequently, cause a rise of temperature which must, of course, be looked upon as an evil.

The editorial in this issue deals with "Ocular Affections of Uterine Origin."

Augustus P. Clarke, M.D., of Cambridge, Mass., contributes a paper on "The Relation of Hysteria to Structural Changes in the Uterus and its Adnexa." This article has already been reviewed in THE MEDICAL AND SURGICAL REPORTER for November 3, 1894, page 628.

In the Department of Pædiatry Henry Howitt, M.D., of Guelph, Ont., contributes

Remarks Bearing on the Surgical Treatment of Intussusception in the Infant,

reporting two successful cases. As the result of his experience the writer presents the following conclusions:

1. The diagnosis in infancy is not difficult, for the reason that obstruction of the bowel by any other cause is extremely uncommon, and when it does exist is sure to be owing to congenital defects or as readily recognized ailments. The sudden and pronounced nature of the onset, the presence of more or less evidence of shock, followed shortly by vomiting, paroxysmal colic and marked tenesmic efforts, which give rise to non-fæcal passages of blood and slime in a child previously healthy or who has a catarrhal affection of the bowel, render the diagnosis for all practical purposes complete. If in addition to these we can detect an oval tumor in line of colon no room for doubt is possible. In consequence of the pliable condition of abdominal walls at this early age a lump the size of a pigeon egg can, in the absence of tympanites, be readily felt by the educated hand.

2. The operation should be performed early and not when the powers of life are ebbing away. Within twenty-four hours of the commencement of attack, and in the absence of marked tympanites, an attempt under chloroform probably should be made by distention and taxis; but this trial should be neither forcible, prolonged nor repeated, and failing, an abdominal section should immediately follow. In the second day and later the operation should be done without a moment's unnecessary delay. The operator should have a practical knowledge of aseptic surgery as applied to abdominal work.

3. The incision should be made in the median line, either above the umbilicus or lower, according to the position of the lump. When the tumor cannot be defined let the middle of incision be at the umbilicus, for through this the part, after evisceration, no matter where situated, may be reached and brought into view. The wound need not be more than from three to three and a half inches in length. The pliable nature of the abdominal walls and the smallness of the cavity render complete exploration with fingers quite easy.

4. Evisceration will be found not only to save time, but to aid very much in facilitating the after-steps of the operation, for it allows more room and permits the large bowel to be readily brought out. The author differs from those who state that it is more dangerous to expose the intestines in infancy than in later life. The eviscerated contents of abdomen should be protected by suitable cloths wrung out of hot water and applied in layers, the outer of which are changed when necessary, or the heat maintained by irrigation with water at a temperature of 92°.

5. Reduction is probably best accomplished by making pressure on the apex of the intussusceptum, while at the same time the intussuscepiens are pulled in an opposite direction. In some instances it is better to break with a probe or other instrument the adhesions at neck and then to make firm pressure on the intussusceptum by grasping the whole mass with the hand before an endeavor is made to reduce it.

6. Before the reduced portion is returned to abdomen the operator should not only demonstrate that the obstruction has been completely removed, but should also empty the contents of ileum into large bowel. The last may easily be done by gently stroking the ileum downward with a soft sponge. The removal of the material from above the place where the obstruction existed performs important work for an organ the functions of which are impaired, and it also greatly hastens the expulsion of offensive and septic matter from the body.

7. The replacement of the small intestines may be facilitated by the surgeon and assistant hooking two fingers of their left hands into opposite sides of the wound and then lifting the lower portion of the body from the table. Should the intestines be unusually distended with gas, it is the author's opinion that there is no objection to multiple punctures with clean hypodermic needles.

8. A point which also applies to most abdominal operations is arrangement of omentum. By spreading the omentum over the bowels it certainly prevents adhesion of the gut to the line of incision. The lymphatics of it are admitted to be endowed with more than ordinary power of absorption, and by extending to seat of impairment may in no small measure prevent trouble. The omentum may also haply become attached to a weak point on the affected portion of the bowel, and thus be an agent in preventing perforation.

9. The wound should be sealed in such a manner that the urine of the child cannot possibly reach it.

The author states that in all six cases of intussusception have come under his personal observation—four in the infant and two in the adult Three were treated by abdominal section and recovered, and three by non-operative means, with one result—death.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Relation of Uric Acid to Urea on Different Diets.

According to Ritter, the relation of the uric acid to the urea on a normal diet is 1:36; on a mixed diet, 1:27.5; on a vegetable diet, 1:22. From this it appears that a person subsisting upon a mixed diet eliminates 25 per cent. more uric acid than a person whose diet is vegetable in character, while the person whose diet is exclusively of an animal nature eliminates more than 60 per cent. more uric acid than a person whose diet is vegetable. This fact, taken in connection with the well-known prevalence of gout among beef-eating Englishmen, is very significant. The facts developed in the physiological laboratory are showing us more and more clearly from year to year the folly of subsisting upon a second-hand diet. The poisons derived from the flesh of lower animals through flesh-eating are doubtless responsible for a vastly greater number of disorders than we are at present aware of.—*Mod. Med.*

Apex Expansion in Phthisis.

Weaver (*N. Y. Med. Jour.*) recommends after a full inspiration to hold the breath for a moment by closing the glottis. The effect is increased if, during the holding of the breath, the lower chest is compressed with the hands. After a few weeks the inspirations become much fuller and the tension developed greatly increased. The arms should be raised in order to get the fullest inspirations. These efforts at forced expiration should be continued for ten to fifteen minutes every two hours during the day—before arising in the morning and after retiring at night. The patient should be under constant medical supervision, and at first the efforts must not be too violent. During hemorrhage and for a week after it is completely stopped, pulmonary gymnastics should be suspended. To overcome muscular atrophy about the chest and to increase its expansion, the patient may learn the use of Indian clubs and dumb-bells and resort to them regularly.

Bismuth in Gastric Disease.

Matthes has investigated, both experimentally and clinically, Fleiner's method of treating irritative diseases of the stomach with large doses of bismuth. The results of the treatment were very successful, especially in lessening pain. From experiments on dogs the author shows that ten to twenty minutes after ingestion the bismuth sinks to the bottom of the stomach, whereas several hours later it is found spread over and fixed to the stomach wall, becoming intimately mixed with mucus. Even with a full stomach a large portion is found similarly deposited. Against the action of chemical agents on the stomach wall this deposit of bismuth is most resistant. In men shortly after the ingestion of bismuth the water used for washing out the stomach returns clear, but if later the stomach contents be expressed, bismuth with mucus is removed. Experimentally, bismuth is shown to increase the secretions of mucus. To determine the action of bismuth in cases of erosion, etc., of the stomach, defects were made experimentally in the stomach mucous membrane of dogs and rabbits, and bismuth was then administered. In some cases the results were very indefinite, but in two experiments positive results were obtained. In one case an adherent crust was found acting as a protection to the defect, and sections from both cases showed healing ulcers. In the case of the crust, bismuth crystals were found in the granulation tissues of the healing ulcer. No symptoms of bismuth-poisoning occurred. Experiments thus show that bismuth adheres to the defect in the stomach wall and that healing may take place in a crust so formed; this crust, however, is not always present. Comparison with control animals showed that in those treated with bismuth the defects healed more rapidly. Digestion can go on while the bismuth deposit is present, although in artificial digestion the pepsin is carried down by the bismuth, and in this way digestion is hindered. The author says that both experimentally and clinically Fleiner's method of treatment is practically and theoretically correct, with the exception of the question of position (in reference to the site of the ulcer), which he shows not to have any influence in regard to the subsequent disposition of the bismuth.—*Brit. Med. Jour.*

Lesions of the Stomach Simulating Cancer.

In Paris lately M. Ferrier drew the attention of his colleagues of the Surgical Society to a form of gastric disorder simulating cancer, and which was much ignored in a surgical point of view in France. A woman entered the hospital with gastric troubles, presenting all the symptoms of cancer and coinciding with the existence of an epigastric tumor. M. Ferrier performed laparotomy for exploring purposes, and found the stomach adherent to the walls of the abdomen and to the left lobe of the liver. After breaking down those adhesions the operator closed the wound, and the patient gradually lost all bad symptoms and left the hospital quite recovered. In concluding, M. Ferrier said that in many cases purely inflammatory lesions could simulate cancer, and an exploring operation would put the case in its true light and do no harm to the patient.—*Med. Press and Circular.*

Rapidly Fatal Atrophic Gastritis.

M. Rosenheim recently reported to the Berlin Medical Society the case of a woman, fifty-eight years of age, who had presented the symptoms, together with the physical and functional signs, of cancer of the pylorus. The patient had been in good health until March, 1893, when she was attacked by gastric troubles, which very rapidly attained a considerable degree of intensity. The loss of appetite, nausea and vomiting were so marked that at the end of fifteen days the patient was unable to leave her bed. Upon examination there were found a small tumor in the pyloric region and slight dilatation of the stomach, an absence of hydrochloric and the presence of lactic acid in the gastric juice. The woman died in June with an appearance of emaciation and cachexia. At the autopsy made by Professor Virchow no cancerous tumor was found. What had been taken during life for a neoplasm was a simple thickening of the muscular layer. The mucous membrane was completely atrophied, and it was probable that to this atrophy death should be attributed. The case is of interest from the double point of view of the mistaken diagnosis, though all the symptoms pointed to carcinoma and its rapid course.—*La Tribune Medicale.*

Puerperal Eclampsia.

Doderlein (*Munch. med. Woch.*) first refers to the deficient knowledge of the causation of this disease and to the want of success attending its treatment. There have heretofore been two lines of treatment, the medical and obstetrical. The morphine treatment can hardly be said to have been successful. Treatment by bleeding, along with infusion, hot baths, etc., has also been ineffectual. The question arises as to whether these cases should be treated with morphine, chloral hydrate, chloroform, and the labor left to itself, or whether delivery should be artificially hastened. If the conditions are favorable to the extraction of the child delivery should be completed, otherwise forced delivery may be a severe procedure. Duhrssen showed that forced delivery under deep chloroform anæsthesia brought the convulsions to an end. If the cervix is dilated to about the size of a two-shilling piece extraction can be practiced by the aid of a few incisions. Where incisions would produce too great an injury, Duhrssen recommends dilatation with the kolpeurynter. The treatment adopted by this author has yielded improved results. Owing, however, to the difficulty of carrying it out in practice and to the risks of infection, Cæsarean section has been proposed. In 19 collected cases of which details are given here, 8 died. Among these 1 succumbed to apoplexy, 1 to general tuberculosis, and 3 others were moribund on admission. In only 1 case did the eclampsia remain uninfluenced. Thus the operative treatment certainly has a favorable influence on the disease. In a primipara, aged forty-four years, with a conjugate of 8.5 cm., Cæsarean section was performed by the author with the best results. No further fits occurred after it.

Lady Mary Wortley Montagu on Inoculation.

In an article in the *Popular Science Monthly* Mrs. Plunkett quotes the following account of small-pox inoculation from Lady Mary Montagu's letters: "Apropos of distempers, I am going to tell you of a thing that I am sure will make you wish yourself here. The small-pox, so general and so fatal among us, is entirely harmless here by the invention of ingrafting, which is the term they give it here. There is a set of old women who make it their business to perform the operation in the month of September, when the great heat is abated. People send to one another to know if any of their family has a mind to have the small-pox. They make parties for the purpose, and when they are met—commonly fifteen or sixteen together—the old woman comes with a nutshell full of the matter of the best sort of small-pox and asks what vein you will please to have opened. She immediately rips open the one that you offer to her with a large needle, which gives you no more pain than a common scratch, and puts into the vein as much venom as can lie upon the head of her needle, and after binds up the little wound with a hollow bit of shell, and in this manner opens four or five veins. The Grecians have commonly the superstition of opening one in the middle of the forehead and in each arm and on the breast, to make the sign of the cross; but this has a very ill effect, all the wounds leaving little scars, and is not done by those that are not superstitious, who choose to have them in the legs or in that part of the arm that is concealed. The children or young patients play together all the rest of the day and are in perfect health till the eighth; then the fever begins to seize them and they keep their beds two days, very seldom three. They have very rarely above twenty or thirty in their faces, which never mark; and in eight days' time are as well as before their illness. Where they are wounded there remain running sores during their distemper, which I doubt not is a great relief of it. Every year thousands undergo this operation, and the French ambassador says that they take the small-pox here by way of diversion, as they take the waters in other countries."

Treatment of Cystitis in the Female.

According to Dr. J C. Hersler (*University Med. Mag.*) the indications for treatment are as follows:

1. To remove any discoverable source or sources of irritation which act through the medium of the urine. This may be effected by a milk diet and a discontinuance of the use of acids, pepper, etc. Any mechanical source of vesical irritation should receive appropriate treatment.

2. The urine should be rendered bland by the use of a milk diet, the ingestion of considerable quantities of water, the administration of potassium citrate if the urine be too acid or of boric acid if it be alkaline.

3. Pelvic congestion should be relieved by

hot vaginal douches, placing the patient in the knee-chest position, and the correction of constipation.

4. The inflamed cystic mucous membrane may be relieved by the administration of boric acid, ol. santali, copaiba or cresote by mouth; or the use of injections of boric acid, carbolic acid or nitrate of silver in suitable strengths.

5. The patient's general health should be improved by tonics, etc.

6. Rest in bed, especially in all acute cases, is absolutely imperative.

While advocating direct local treatment for cases of cystitis which do not readily respond to ordinary therapeutic measures, the writer advises that it should be employed with judgment and caution.

Two New Signs of Dilatation of the Stomach.

It is not difficult to diagnose gastrectasia when it has attained any degree of development, but at the inception of the affection the difficulties which beset the physician are many. Many of the methods of diagnosis are impracticable in private practice. M. Aufrecht directs attention to two new signs obtained by percussion. In percussing a stomach which has commenced to dilate, by means of a pleximeter, one obtains at certain points in the gastric region a dullness more or less complete in lieu of the usual tympanitic tone. If the pleximeter is kept at the point of dullness and feeble percussion is made, after waiting a few seconds the dullness will be found to have been replaced by a tympanitic tone. This phenomenon is explained by contraction of the walls of the stomach on account of hypertrophied muscular coat which is constantly present in gastrectasis. The second sign is a cracked-pot sound which is obtained in the immediate vicinity of the dullness already described.—*Sem. Med.*

The Treatment of Typhoid Fever.

Lee (*Chicago Med. Rec.*) thus formulates his treatment of this formidable disease. Without waiting for the development of typhoid fever the very first proposition is to make the patient surgically clean. The bowels are drenched with a copious douche of water, either plain or soapy, until the water returns as clean as it enters the bowel. Bathing is performed at regular intervals. The patient is put in a cold pack to reduce the temperature. The internal treatment is uncomplicated, safe and useful. Its basis is cold water. Large amounts of cold water are given at regular intervals. The food is milk and eggs. Stimulants and drugs are injurious, without exception.

Rheumatic Nature of Chorea.

Before the Eleventh International Medical Congress of Rome Sir Dyce Duckworth read a paper with the above title, a summary of which is here presented:

Chorea is not only related to rheumatism, but is itself a variety and a manifestation of this disease.

It is a form of cerebral rheumatism, representing one of the many extra-articular varieties of this disease.

Lesions may be found in the heart and in the brain, and, as far as we can say to-day, the cortical region is the part involved.

It is impossible to distinguish, during life or after death, any difference between the endocarditis due to rheumatism and that which is supposed to be due to chorea.

Shock, mental overwork or physical emotion are the causes ordinarily producing chorea, but these can give rise to the disease only in children who have inherited the rheumatic habit.

The symptoms of chorea point to the action of certain systemic poisons, and as these have been shown to be the efficient cause of rheumatism in about 80 per cent. of all cases, so we ought to conclude that they are the efficient cause of all cases of chorea, or that at most in a small percentage the disease results from the action of some other toxic substance having a remarkable affinity to the rheumatic poison.

As the manifestations of rheumatism are now clinically recognized in parts of the body other than the joints, so chorea may be considered as a variety of rheumatism specially affecting the brain.—*Med. Age.*

ANATOMY.

Anatomy of Fallopian Tubes.

Mary Dixon Jones (*Amer. Jour. Obstet.*) has distinguished six layers of smooth muscular tissue in the human Fallopian tube. The two main layers are the circular and longitudinal. They interlace, and the circular layer, which is the thicker, is nearest the canal of the tube. The inner surface of the tube is made up of submucous myxofibrous connective tissue, supplied with a broader longitudinal and a narrow circular layer of muscle. The mucosa has numerous folds which ramify, and are the result of alternate contractions and extensions of the two muscular layers of the submucous tissue. Outside the longitudinal muscular fibers of the tube wall is a layer of arteries and veins arranged as in the corresponding vascular tissue in the wall of the uterus. Two oblique layers of muscular fiber are interposed between these vessels and the investing peritoneum. Dixon Jones can fine nothing on the mucous membrane of the Fallopian tubes of the human female, even by high powers of the microscope, that would justify the definition of glands.

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ORIGINAL ARTICLES.

OBSERVATIONS UPON THE CHARACTER AND MANAGEMENT OF TYPHOID FEVER.*

C. Z. WEBER, M.D., Norristown, Pa.

Reviewing the records of cases treated during a period of now almost twelve years of continuous practice in this community, I find that in the treatment of this malady I have obtained results sufficiently satisfactory to warrant me in presenting them briefly for your consideration.

Typhoid fever, now universally recognized as a germ disease, self-limited probably as to length of duration, highly infectious and slightly, if at all, contagious, presents features somewhat varied in character according to the geographical location in which it is found.

Upon reading numerous authors who have written voluminously upon this subject, the conviction is forced upon us that in this locality at least we do not encounter the disease in its most virulent, if in its more nearly typical, form. True, "walking cases" such as we occasionally meet with here are described also by these authors, and upon the other hand, we are careful to take cognizance of the cases in which serious brain symptoms accompany the early stages of the disease; but the grave course usually ascribed to the disease is found in only a comparatively small number of our cases. With reference to the milder class of cases, however, I firmly believe that wherever the disease prevails, cases occur more frequently than we are wont to admit of a type so mild and obscure that their true nature is not discovered by either family or physician, and positive evidence of its existence is only betrayed by late manifestations. As an illustration, we are all familiar with the tendency of mild cases of scarlet fever to run a course unobserved until albuminuria or dropsy manifest themselves to the medical attendant, whose suspicion is corroborated by an outbreak of other cases in the family or neighborhood by virtue of the active contagion that attaches to this affection.

For a clearer elucidation we may be pardoned for introducing the following classification of the varied forms of the disorder under treatment, given in the order of their frequency:

SUMMARY.

Uncomplicated* cases,	47
Abortive cases,	4
Walking cases,	4

*Read before the Montgomery County Medical Society, November 7, 1894.

*We use the term "uncomplicated" here synonymously with "typical," by which we refer to those in which the disease runs a comparatively typical course extending over a period approximating four weeks, at the expiration of which the evening temperature first registers at 98.4° F.

Cases	complicated	with	inflammatory rheumatism,	4
"	"	"	malaria,	4
"	"	"	neuralgia,	3
"	"	"	bronchitis,	2
"	"	"	hemorrhage,	2
"	"	"	intercurring pregnancy,	3
"	"	"	pneumonia,	1
"	"	"	general muscular cramps,	1
"	"	"	la grippe,	1
"	"	"	extra length of duration,	1
"	"	"	persistent subnormal temperature,	1

The management of these 78 cases resulted in 75 recoveries and 3 deaths. Of the deaths, 2 occurred in the class of "walking cases." Death No. 1 occurred July 6, 1886; presented the following history: Male, aged twenty-two years, nativity a Swede, occupation glass-blower, married. First saw him at my office June 29, 1886. He consulted me for something to cure "malaria," as he termed it, his complaint being that he had been obtaining office treatment from several physicians for the past two weeks, without apparent benefit to himself. He had been following his employment daily during this period. He complained of a general tired feeling, not improved by his nightly rest. He was ambitious to receive an unbroken month's pay, as this was the last before the annual shut-down in his line of business, and he stoutly maintained that he was not too ill to work. Obtaining a history of slight diarrhœa at times, occasional epistaxis, more or less headache, which he had been regarding as malaria, I took the temperature and was surprised to find it out of all proportion to both his subjective and objective symptoms. The thermometer registered 104.5° F. Succeeding, temporarily at least, in impressing him with the gravity of his condition, I advised him to go home and take to his bed, promising to visit him the following day. Under treatment and liquid diet for several days his condition improved so much that, becoming rebellious against confinement and restricted diet and at the same time distrustful, he insisted, after the lapse of four or five days, upon dressing and going downstairs; and in utter disregard of warning as to probable consequences, in order to prove that people are sometimes not as sick as the doctor makes them out, he threatened to join his family in a good square meal then in course of preparation, consisting of chicken pot-pie and seasonable vegetables. This occurred at my morning visit, and as I was growing tired in my efforts to convince a man that he was sick, after taking his temperature, which I found at 102.5°, I gave him formal notice of my immediate retirement from the case, and the patient was left to shoulder the responsibility of his venture.

Just after midnight of the same day I was recalled to the case, as he was reported suffering from intense pain in the abdomen, and it was feared he was in a critical condition. Upon reaching the bedside I found the patient in most agonizing pain; the body bathed in a profuse cold perspiration; a feeble rapid pulse, if a pulsation could be said to exist at all; a greatly distended abdomen; the countenance anxious and changed almost beyond recognition; in fact, every indication that a perforation of the bowel had taken place. He presented a sorry contrast, indeed, with the defiant, venturesome, though foolhardy man of a few hours before. He had partaken of the injudicious food, and under the circumstances the only thing to be looked for was the certain death which followed in a few hours. A post mortem was denied, but there could be no doubt as to the cause of death.

Fatal case No. 2 presented the following history: Young man; single; aged seventeen; apprenticed to the carpenter trade, which employment he was following daily. Having an annoying headache and feeling unusual fatigue from his daily work, he availed himself of office advice and treatment from two physicians for upward of a week. His objective symptoms, a lack of energy and depressed spirits, strangely associated with an inordinate appetite, very naturally aroused the anxiety of his parents, who summoned me to see him at the end of his day's work. He had just finished a hearty supper, such as is usually provided for a laborer who is accustomed to subsist upon cold dinners. He informed me that he was not feeling very sick, and in his opinion he only needed rest, as the weather had been warm and the work unusually hard for the past week. Upon questioning him pointedly I obtained a *suspicious* history, and was astonished to find his temperature to be 104° F. He was ordered to bed forthwith, the diet restricted and an antipyretic administered at regular intervals. A light dose of castor oil was ordered for

the following morning, to be taken fasting, with view of correcting a slightly painful diarrhœa and also ridding the alimentary tract of any offending material most likely to have been injested.

A slight reduction in the temperature followed. The antipyretic in small doses was continued tentatively until a diagnosis could be reached. All was now so well that upon my visit August 17th, having been first called August 14th, there was a strong probability that the typhoid fever view was erroneous. Upon the following day, however, I was hastily summoned to the house. Upon making an examination I found the patient in a condition of collapse, having complained an hour previously of a severe and sudden pain in the neighborhood of the umbilicus. A hypodermic injection of morphia with atropia was administered, and upon returning to the bedside about one hour later there was revealed a greatly distended abdomen, and while the character of the circulation was slightly improved it proved to be but temporary, his condition growing rapidly worse, death resulting early the following day. A post mortem disclosed a perforation of the bowel, as was suspected from the symptoms exhibited.

Death No. 3 occurred in a female, aged forty-six, on the fourteenth day of what had been a case of moderate severity, as temperature had not registered above 103.5° even during the first five days of the attack. In this case it was not found necessary to push the antipyretic treatment after the first few days. The immediate cause of death here was paralysis of the heart induced by exhausted vitality, the combined result of grief, the climacteric period and typhoid fever.

We would divide the treatment of typhoid fever into two periods, viz.: that conducted while arriving at a diagnosis and that employed in the treatment of the disease proper.

As a means of establishing a diagnosis a reliable thermometer is of incalculable value. Whether consulted at office or visiting at patient's home, the practice of taking the temperature is absolutely indispensable. In this age of criticism I would greatly prefer to be ridiculed for the excessive use of the thermometer than be charged with any one of the sins of omission that might be attributed to neglect. If a temperature of 102° or thereabout is found to be present, accompanied with symptoms of general malaise, loss of appetite and evidence of greatly impaired nutrition; with a history covering a period of from several days to as many weeks of a general broken-down state of health; with irregular periods of diarrhœa and constipation; inability to sleep at night and an inclination to sleep in daytime; more or less headache; if not a decided chill, then chilliness; a coated tongue and its concomitant a bad taste; bad state of the mucous secretion, especially in the nasal region where rupture of the capillaries (epistaxis) takes place, etc.—with this array of symptoms I am at least suspicious of typhoid fever. If the bowels have not been freely moved some time during the preceding twenty-four hours, one grain of calomel is administered, followed in from two to four hours by a saline, as for example one-half to a teaspoonful of Epsom salts or a Seidlitz powder. With a view to eliminate the possibility of the presence of intermittent fever, two hours after the administration of the saline quinia is commenced with and continued in from two to five grain doses until twenty grains in all are taken. This should be managed so that twenty grains are administered in as many hours from the time the temperature was taken. If at the next visit the bowels are found to have acted with inordinate frequency, a point in diagnosis in support of your suspicion is established. Further, if the temperature is found to be higher by a degree or more than twenty-four hours previously, the suspicion may be presumed to be still further founded upon fact.

Notwithstanding the increase of fever, the treatment so far may have produced such an amelioration in the subjective symptoms that the patient feels that he is ready to return to his employment. The temperature may now be found to approximate 102.5° perhaps, and we find ourselves confronted with "a fever." So directing the patient to bed we commence with an antipyretic in doses sufficient to control the temperature, while we wait for several days to further corroborate our suspicioned diagnosis by the appearance of "rose-colored spots" or other unmistakable signs of typhoid fever. In the mean time our antipyretic treatment is being supplemented by having the patient's body

sponged with tepid water as frequently as the surface becomes hot and dry, and during this interval also a grain of calomel, followed as often with a saline laxative, is given on alternate days with a view of clearing the alimentary tract so far as practicable of its probable obnoxious contents.

The antipyretic we have been employing thus far is salicylate of soda, a remedy without which, in the light of our observation and experience, we would feel greatly handicapped in assuming the responsibility of the management of a case of typhoid fever.

The physiological action of this remedy being both *antipyretic* and *antiseptic,* we have at once an implement of warfare commensurate in a large degree with the destructive power of the enemy attacked.

Should you be deceived in your diagnosis, the treatment thus far pursued will have done no manner of harm to the patient, and nine times in ten, should you not be dealing with a case of typhoid, you will be surprised to find the patient's temperature gradually approach the normal and his convalescence brought about. It is but fair to state that even in what subsequently prove to be genuine cases of typhoid fever, about the end of the first week the temperature will sometimes be found to be at or even below the normal if taken in the early morning.

Should such a contingency occasion doubt as to the correctness of the diagnosis, it could be quickly dispelled by withholding the antipyretic until a later visit.

Should it be proven that you have been coping with genuine typhoid during this time, you have been passing through the most troublesome part in the management of the case. The anxious sufferer, in a greater or less confused state of mind, has been endeavoring to keep track of his business, but this interest in his personal affairs has gradually lapsed into an entire indifference with reference to his surroundings, while the family, prompted to action by their over-zealous relatives and neighbors, have been a unit as to your seeming stupidity in not being able to make a diagnosis upon your very first visit. And should you be so unfortunate as to be a recent graduate, while you may not have been openly asked to make an "unconditional surrender" of the case by the time the first crop of rose-colored spots exhibit themselves upon the surface of the patient's epigastrium, you have felt nevertheless that your destiny in the case has been wavering in the balance of the family's dissatisfaction.

After much tribulation, so to speak, the diagnosis of typhoid fever is fully established. Some responsible person in the family or the sufferer's nearest friend is now informed of the opinion reached, whereupon we take pains to explain that in the course of this disease there are two dangerous symptoms likely to be encountered, viz., hemorrhage and perforation of the bowel, and we at once enlist the hearty coöperation of the family or nurse in the supply of nourishment safely suitable for the patient. Up to this point the patient has been supplied with a moderate allowance of water, but has taken very little in the way of diet.

For a period of several weeks, determined of course by the length of time the disease has already run, and as carefully persisted in for two weeks after convalescence is begun, the diet should consist solely of milk and meat broths with an occasional addition of light farinaceous desserts, specially cooked soft-boiled eggs, allowing plenty of pure, cold, but not iced water.

At this stage dilute hydrochloric acid is added to the medicinal treatment. So with salicylate of soda and hydrochloric acid on the one hand and with milk and meat broths upon the other, we proceed to fortify the patient against the ravages of the disease at the same time we lift up the barriers of vital force which enable him eventually to overthrow it.

In the administration of salicylate of soda, from eight to fifteen grains will usually be found sufficient to hold the temperature within safe limits. I am in the habit of employing the following formula:

Sodæ salicylate.....	℥ ss
Elix. potass. brom.....	āā q. s. ad. ℥ij
Syr. sarsaparilla comp..	

M. Sig.: One-half to a teaspoonful every two to four hours.

The conjoined use of potassium bromide, five grains to the dram of the mixture, overcomes to some extent the slight ringing in the ears occasioned by the salicylate, besides exerting a favorable therapeutic effect upon the over-distended cerebral vessels.

I have always found it desirable to fix

the administration of the fever mixture at certain hours. Thus it may be given at the hours of 1, 5 and 9 A.M. and at 1, 5 and 9 P.M. If a thermometer be left with the nurse, the size of the dose to be given may be determined by taking the temperature at these stated intervals. At the discretion of the nurse also the doses due at 11 P.M. and 3 A.M. may be omitted as the medical attendant may advise. If the fever is running a mild course a half-teaspoonful of the mixture at the intervals stated will prove sufficient. A temperature of 102° to 102.5° F. is the limit above which it should not be permitted to run without administering proportionately increased doses of the antipyretic, supplemented of course with tepid-water sponging, which is found grateful to the patient's comfort.

The allowance of milk the patient is to receive should be given at least a half-hour before the antipyretic mixture, which enables both stomach and system to prepare for the coming dose. If a mild case is being dealt with salicylate may only be found necessary for its antiseptic effect, in which case it could be used every other time it would otherwise be employed; for instance, at 5 A.M. and the hours of 1 and 9 P.M. Assuming the hours for the administration of the salicylate to be fixed as above, the intervening even hours may be very systematically used for the administration of the hydrochloric acid and broths. They would therefore come at the hours of 3, 7 and 11 A.M and at 3, 7 and 11 P.M. I usually employ about from ten to twenty minims of the dilute hydrochloric acid in a wineglass or more of water immediately after the injestion of a cup of properly prepared broth, such as of beef, lamb, mutton or chicken, as the judgment of the nurse or physician may dictate. There can be no objection to the addition of a small portion of rice or barley to the broth if desired.

At the termination of the febrile stage and during the period of two weeks which should elapse before solid food could with propriety be allowed, semi-solids, such as baked potato with salt and butter, broiled, raw or stewed oysters with the eye discarded, stale bread or stale toasted bread without the crust and moistened with milk. Stale bread may also be allowed served with the milk dressing from fried ham or frizzled salt or fresh beef, the juice from under-done roast beef or broiled steak, any of which will be greatly relished by the patient, who is now beginning to call your attention to the savory odors ascending from the family cook stove.

Arriving now at the end of the third or fourth week, the patient is ready to be assisted to a sitting position, if not to an easy-chair, when an uninterrupted convalescence is anxiously hoped for.

Additional treatment found necessary in the management of typhoid fever will obviously be symptomatic.

For restlessness three to five grains of Dover's powder will not only produce sleep, but tranquilize both mind and body as well. If diarrhœa is a feature of the case, this same remedy may be given in the same doses after each excessive movement of the bowels. Should there be troublesome delirium, from ten to thirty grains of potassium bromide will have a happy sedative effect.

Should constipation characterize the case—and I find this to be a feature in about one third of the cases—the only safe agents to employ are castor oil in about one-dram doses or a carefully administered enema.

In the cases in which hemorrhage occurred morphia was given at once hypodermatically, and this followed at intervals of from two to three hours with from five to ten drops of deodorized tincture of opium until the period of danger was passed.

Of the three females whose cases were complicated with the pregnant state, two carried the fœtus to full term. The third aborted one month after convalescence was established. Quickening should have taken place during the progress of the fever, but as it did not manifest itself the death of the fœtus was suspected, which suspicion was in due time verified.

When typhoid fever was found complicated with other affections, such as rheumatism, bronchitis, intermittent fever, neuralgia, pneumonia, etc., these intercurrent maladies were combated with a line of treatment indicated for each when separately met with, modified as to agents employed and intervals of administration so as not to interfere or be incompatible with the treatment being pursued for the fever in hand.

As typhoid fever is known to be a highly infectious disease, the medical at-

tendant is not performing his whole duty to the family of the patient nor to the community without having made a thorough inspection of the premises and notably the water and milk supply of the family. While this may be too late to be of advantage to the patient, the health of the family or community may be in constant peril from the source from which the case in charge originated.

Ordinary fresh burned lime as obtained from the kiln for building or other purposes, properly prepared. is a germicide of recognized power, and it also has the advantage of being inexpensive and therefore within the ready command of even the humblest home. This should be kept in two forms: the one is obtained by treating the lime with hot water until reduced to a proper consistence; the other with just sufficient water to cause the lime to crumble into an impalpable powder. To destroy as far as practicable the poison germs in the dejections, the nurse is instructed to keep a bed-pan or a vessel charged with about a quart of the lime of about the consistence of thick cream in readiness at all times to receive the stools. This should be thoroughly incorporated with the lime by stirring before it is buried in the earth, which should be at a place safely remote from all sources of water supply for drinking purposes. The closet, if a well and used by the victim of the disease prior to his treatment, should be sprinkled and dusted with a liberal supply of the freshly slaked dry lime, and this process repeated at regular intervals until it can be emptied and the empty well disinfected in like manner.

OVARIAN CYST.*

E. E. MONTGOMERY, M.D., PHILADELPHIA.

In my clinical work before you during this year, it shall be my aim not so much to attract your attention by the operations that are done as to make a true exhibit of the work that should be done in the class of cases which will be met with in the gynecological field. My aim shall be to teach you to save rather than to destroy, to restore to the normal condition rather than to sacrifice. The tendency of the present time is toward conservation rather than mutilation.

The first patient I show you is a woman sixty-one years of age; her father died at ninety-three, her mother of some lingering disease, and her maternal grandmother died of cancer of the face. She is married, has had eight children and one miscarriage. All her children are in good health. Her menstruation began at fifteen, the menopause occurred at fifty-one, and the present trouble followed. She suffers from lumbar pain, particularly in the right side. This has been much aggravated during the last six months, when the pain has been almost constant. From the lumbar region it has extended over the abdomen. She has had constipation during her entire life; has gone at times days and even weeks without defecation. She suffers from a leucorrhœa which is increased of late; micturition is very frequent, sometimes passing urine as often as one hundred times in twenty-four hours. This urine contains blood and pus; the specific gravity is 1018; color light yellow; no albumen is present, but it contains blood-casts. She is somewhat emaciated, has lost considerable flesh and is weak and debilitated. As we look at her abdomen we notice that it is not regular and symmetrical, and there is that relaxation of the abdominal walls which we would expect present in a woman who has given birth to eight children. It is not surprising, consequently, to find the abdomen flattened out and somewhat irregular, even though there was nothing abnormal in the abdominal cavity. You will notice, however, it projects more especially on the right side. This projection is limited to the spaces above and below the umbilicus and is more prominent on the right side, so we do not have a symmetrical distention. If this distention were mere obesity we would expect to

* Clinical lecture delivered at the Jefferson Hospital.

find it characterized the abdomen alone and there would be more or less prominence, which would be situated at the lower part of the abdomen and would likely be symmetrical—that is, it would be the same on either side. In this patient, however, as she lies on her back, the distention of the abdomen is not symmetrical but is very marked to the right.

In any disease of the abdomen we take into consideration the fact that there are in the abdominal cavity certain viscera. Any of these viscera may give rise to growths which produce very characteristic symptoms. In order, then, to arrive at a definite diagnosis of the character of any growth and the organs by which it is affected, we mark out the abdominal surface by arbitrary lines into a number of spaces; thus we draw a line across the level of the eighth rib, another at the level of the highest point of the crest of the ilia. These lines divide the abdomen into three spaces; these are subdivided by a perpendicular line bisecting Poupart's ligament, which consequently divides the abdomen into nine spaces, from above and to the right and left hypochondriac and the hypogastric, and the right and left lumbar and umbilical, the right and left iliac and the hypogastric regions. In each of these divisions of the abdomen we recognize there are situated portions of different viscera. On the right above we have the upper part of the liver, the right kidney, the ascending colon, and on the left the spleen, the left kidney, the descending colon. In the epigastric region we have the stomach, the left lobe of the liver and the gall-bladder. We also have the colon, the small intestine, and in the lower portion of the abdomen in the hypogastric region we have the uterus and bladder, and on either side the ovaries and posteriorly the rectum. In the right lumbar region distentions may arise as a result of inflammation about the appendix or cæcum. In addition to the conditions named, we may have enlargement of the abdomen from the presence of growths in the mesentery and omentum or from retroperitoneal tumors. If a patient, then, presents herself suffering from an abdominal tumor, we endeavor by inspection and palpation to determine the portion of the abdomen in which it is directly situated. Having determined this, we take into consideration the viscera of that region and endeavor by a process of elimination to satisfy ourselves as to the particular portion of viscus involved. This tumor is situated altogether to the right of the abdomen; it consequently may be due either to enlargement of the liver, to a condition of the kidney, to malignant disease possibly of the ascending colon, a growth situated more particularly in the lower part of the abdomen, which may be determined also by vaginal examination, may arise from the ovaries or uterus or growths involving the intestine in that region.

The methods by which we examine a patient may be divided into inspection, palpation, percussion, auscultation and exploratory incision. By inspection we recognize any irregularity in the abdomen, the part in which it is situated, discolorations of the cervix, cicatrices or striæ. These are quite marked in this patient, indicating the abdomen has undergone such distention as to cause rupture of its pigmentary layer. These striæ are frequent in pregnancy. Rarely does a woman attain to the full term without more or less of such phenomena present. While this is considered as one of the signs of pregnancy, it should be kept in mind that it is not a result of pregnancy alone, but of any condition which causes sufficient distention of the surface to bring about such a change in the skin. It may result from ovarian or fibroid tumors, from a distention from ascites or obesity. The discolorations of the skin should be noted. These are more marked in the brunette, less so in the blonde. Pigmentation in the skin in some cases is very extensive. These discolorations also are not confined to pregnancy. In a woman who has been pregnant we frequently find a dark line known as the linea nigra, running from the umbilicus to the symphysis, in some cases even extending to the xiphoid appendix. We also find more or less discolorations of the skin on either side. These discolorations take place in other distentions of the abdomen, as ovarian disease and uterine growths, and are in particular characteristic of some forms of amenorrhœa. Indeed, it has been asserted that the change in pigmentation is due not so much to the fact that the woman is pregnant, but to the arrest of menstruation; that there is an elimination of material through menstruation

which would otherwise be deposited in the skin. There are other discolorations which result from inflammatory conditions produced by various counter-irritant applications. These serve to throw light on the previous history of the patient. For the inspection the patient is placed upon a table or bed, the abdomen is bared and a sheet placed over the lower extremities, making it hug closely the lower part of the abdomen.

While we conduct the inspection we may proceed with palpation. This is performed by placing the hands over the abdomen, sometimes in grasping the entire abdomen, at others bringing the hands closely together from side to side over the distended parts, and in this way securing a definite idea of the size, consistency, regularity and mobility of the growth. In so doing we determine whether it is a solid or a fluid growth. By solid we mean one which is more or less made up of solid material. A cystic tumor is one which contains within a sac more or less fluid.

As the hand is placed over the abdomen in this patient, I notice on the left quite a considerable projection. It gives rise to fluctuation, or sensation of elasticity, which indicates fluid contents. At other points in this tumor there is a sensation not so distinctly determined which is more resistant, although a greater part of it would indicate that we had to deal with a cyst rather than with a solid body. Placing the hand over the abdomen and tapping on the opposite side, a distinct wave of fluctuation can be distinguished. This is particularly marked if the fluid is free in the abdominal cavity. It is marked also if the fluid is contained within a single cyst, but if you have one in which there are a number of divisions, the partitions will interfere with the fluctuation wave, rendering it less distinct, and where the cavities are small may make it indistinguishable. The wave here is distinct and extends over the side on which percussion is made. The symptom of fluctuation is one which should be carefully studied in every case, for by it we are enabled to determine whether the fluid is contained in a single sac or is free in the cavity.

By palpation I am led to assert that this growth contains fluid; that it is not a single sac, but composed of a number of sacs; consequently fluctuation does not present a long wave. In such cases there is a possibility of error. We may have in a fibroid tumor, as a result of interference with the circulation, the tumor become filled with fluid; in other words, it is œdematous. In such cases I have been in doubt whether we had not, instead of a fibroid tumor, a fibro-cystic tumor. I remember some years ago, in doing an operation upon a patient whom I had examined some three weeks before and had satisfied myself that she had a fibroid tumor, the pedicle was somewhat long and the tumor readily moved about. Three weeks after the first examination, when I came to operate upon her, the tumor had greatly increased in size, the growth had apparently been rapid, and there was a distinct sensation of fluctuation and elasticity, greater than we would find in the growth before us. If I had not examined the patient previously I would have been in doubt as to whether it was a cystic tumor or a fibroid. The operation was done, the tumor removed, and a distinguished surgeon and pathologist, taking up the mass, said it was a fibro-cystic tumor. With a knife he cut through it and did not find a single cyst. It was a fibroid whose circulation had been interfered with and the growth had become œdematous. The fibrous tissue was so separated by the fluid that it had given rise to the distinct sensation of fluctuation to such a degree as to lead this experienced gentleman to believe it was a cyst.

In the case before us the irregularity of the growth, with its sensation, renders it impossible that it can be due to an œdematous solid tumor, consequently a tumor containing a number of small cysts. Solid tumors in a woman of this age are rare. Fibroid tumors have their greatest activity prior to the menopause. Subsequent to the climacteric a solid growth which has increased rapidly in size is more than likely malignant. That this is not a malignant growth is rendered probable by the fact that it has been in existence for ten years. It began shortly after the menopause, has increased in size, although the patient within the last year has felt more discomfort and distress than prior to that period.

There is but little to be learned by either auscultation or percussion. Percussion enables us to outline the relation of the intestine to the tumor, and as I pass to the

left we recognize the intestinal resonance. In other words, this tumor, having begun on the right side of the abdomen and increased in size, has pushed the intestine to the left and upward. When I examined this patient a few days ago I was in doubt as to the character of the growth and the organ from which it originated. Of course, in considering the growth itself, as it is more upon the right side we have thought of the possibility of it having originated from the liver, kidney, ovary, or as a growth from the uterus.

That this tumor is not one of the liver we are inclined to believe from the fact that it is situated low down in the pelvis; there is not the distention of the upper part of the abdomen; we are able to pass the finger between the tumor and the ribs and to determine that it does not extend beneath the ribs. Further than that, as we palpate we can notice a line of resonance between the tumor and the liver, so excluding the liver.

We next consider the possibility of its having originated in the kidney. The tumor is situated well upon the right side, more marked on the right than the left; it is very much in the situation we would expect a tumor which had developed from the kidney. A tumor in the kidney attaining considerable size will project beyond the median line. This patient gives a history of frequent micturition, of having evacuated pus and blood with the urine; a history of deficient amount of urine, not more than eighteen ounces in twenty-four hours. All these symptoms would indicate the possibility of this being a diseased condition which may have originated in the kidney. When we consider the growth of the tumor, its situation, that it extends over toward the left side, fills up the space extending transversely across the abdomen, much wider transversely than vertically, that there is a slight sensation of fluctuation and the tumor is irregular, it becomes improbable that it has originated in the kidney; as a diseased condition of the kidney to give rise to a tumor of this size must be either inflammatory or malignant. Inflammatory disease may arise as a result of calculi in the renal pelvis; the presence of calculi may produce distention from the subsequent irritation, infection and suppuration. It is not unusual for such tumors to attain large size. I operated only a few days ago upon a tumor as prominent as this on the left side of the patient which did not project as far beyond the median line as this does. In that patient we found a quart of pus. It had originated from a calculus in the pelvis. But the history in this patient is not that of an inflammatory condition. We find no indication from the temperature record of any marked deviation from the normal. I am not, then, inclined to believe, from the appearance of this tumor and the length of time it has been in existence, that it is a distention of the kidney as a result of suppuration. In this consideration I believe the decreased amount of urine and the deposit of blood and pus may be due to pressure upon the ureters, possibly also upon the kidney, but particularly upon the bladder. The length of time the patient has been carrying it, ten years, is too great, it seems to me, for the growth to be due to the presence of pus alone.

Eliminating the probability of this growth being one of the kidney, we question the possibility of it being disease of the ascending colon. She gives no history of obstruction, while she is suffering from constipation. The absence of obstruction does not justify such a diagnosis. The tumor has been increasing in size. We are enabled to eliminate the probability of it being malignant disease of the intestine, while it is difficult to determine externally what we may find within the abdomen.

We are confined, then, to the probability of its being a growth of the uterus, of the ovary, or a retroperitoneal tumor. In retroperitoneal tumors we would expect to find, as it increases in size, the colon would be pushed in front of it, possibly over it. In this case the colon is situated to one side and not over the growth, consequently this tumor is within the peritoneum. I operated a little over a year ago upon a patient who had had a tumor for nine years in which there was marked distention of the abdomen and a distinct sensation of fluctuation. Although there was a line of readily recognized resonance running over its side, I had no hesitancy in believing it was an ovarian growth. The abdomen was opened, when it was found the tumor was situated behind the peritoneum. The peritoneum was opened, a trocar plunged into the tumor and the latter subsequently drawn out, leaving the

entire left side of the abdomen denuded. In this space the kidney could be seen distended and sacculated. So distended was it that it resembled a cyst, and after inspection it was decided to remove it. The fact that the line of resonance extended over the side of this tumor in the situation of the colon should have led me to suspect the possibility of it being other than an ovarian tumor. It is not impossible that in some forms of cysts of the ovary the situation may be such as to simulate very closely a retroperitoneal cyst, but such cases are rare.

As I make a vaginal examination of this patient I find the uterus is pushed down and rests beneath the tumor; that it can be easily moved over its surface, so that we are driven to the conclusion that this is a tumor of the right ovary, of a cystic character, containing a number of small cysts; that its contents are probably thick and viscid, and there are without doubt a number of adhesions. Before proceeding to consider operation in this case we will have the urine tested, and if it is eliminated in proper quantity we will proceed to prepare her for operation.

THE VARIOUS OPERATIONS FOR THE RELIEF OF CHRONIC AND SCLEROSED MIDDLE EAR CATARRHAL INFLAMMATIONS, AND WHEN SUCH SHOULD BE PERFORMED.

LAURENCE TURNBULL,* M.D., PH.G., PHILADELPHIA.

A large number of individuals are susceptible to sudden changes of temperature, exposure to draughts or currents of air striking any part of the body, but especially the back of the neck, feet or an uncovered part. They soon feel that they have taken what is termed a "cold," the first symptom of which is sneezing. This is followed by a watery discharge from the nostrils and by swelling of the membrane covering the turbinated bones. If this condition is not promptly treated by a solution of cocaine to the nostrils, with five grains of Dover's powder at night, so as to keep the skin warm and moist, the inflammation progresses and the discharge becomes mucous, yellow or yellowish-green, from a mixture of the blood corpuscles from the surface of the membrane which has become abraded. This condition should be promptly treated by mild antiseptics, alkaline washes, the use of Politzer's air douche and large doses of quinine.

The patient usually recovers rapidly from the acute symptoms, but if neglected there may be as complications not simply a stuffy feeling with itching in the ears, but tinnitus aurium and perforation of the membrana tympani, known in common parlance as a "running ear," or otorrhœa. This in scientific language is termed otitis media purulentia. If the head or brain become involved and there is no perforation, it is then necessary to perforate the drum membrane to relieve the patient. The dry treatment with boracic acid is then employed, keeping the Eustachian tubes free.

Instead of this acute course there is what is termed the catarrhal adhesive process, causing thickening of the membrana tympani with a great increase in deafness from constant attacks. Then occur alterations with contractions, calcifications, ossifications of the bones of the middle ear and obstructions of the Eustachian tubes, when it is termed sclerosed. In some persons the deafness increases slowly for months or years perhaps, while in others it is very rapid from effusion of blood, serum or lymph involving the stapes, oval window (fenestra ovalis), labyrinth or the vicinity of the auditory nerve. The bones of the ear become anchylosed or fixed by bands of lymph, or they are found to be ulcerated and more or less dried and destroyed, acting as foreign bodies producing distressing noises. These processes with deafness are increased from hereditary predisposition, also from anæmia, scrofula, tuberculosis or constitutional syphilis.

The diagnosis from the first class is not

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difficult by careful consideration of the appearance of the membrana tympani, which is sunken from obstruction of the Eustachian tubes, often contains chalky deposits or shows practical atrophy. The test must be made by the watch and tuning-fork; also by the tests of Rinne and Weber. The use of the exhauster of Siegel and Delstanche is important, as by this method may be determined where are the adhesive portions of the membrane.

The prognosis is almost always unfavorable. Even after long treatment by injection of medicated air into the middle ear, by the use of vapors or solutions, by rarefaction and stimulation, a relapse is apt to occur if the treatment is not long enough continued.

It will be well before finishing this part of our subject to dwell for a few moments on the tests before mentioned, those of Rinne and of Weber. The first was brought forward in 1855. Rinne stated that in those cases in which the tuning-fork is heard longer through the cranial bones than before the ear a disturbance of the sound-conducting apparatus exists. This is known as "negative Rinne." Where, on the contrary, the tuning-fork is perceived longer before the ear than through the cranial bones ("positive Rinne"), it indicates, according to Rinne, a disease of the auditory nerve apparatus.

In Weber's test it was found that if sound conduction to the labyrinth was hindered by pathological changes in the external meatus or the middle ear, a vibrating tuning-fork placed on the middle line of the skull will be heard most distinctly in that ear where the pathological change occurs. In using the test the handle of the tuning-fork is set on the medial line of the skull, or on the median line of the upper lip against the incisor teeth, or on the median line of the lower jaw.

COMMUNICATIONS.

"SOME SURGICAL SINS"—REMARKS ON A PAPER CRITICISING THE PROFESSION.*

M. PRICE, M.D., PHILADELPHIA.

I wish to call attention to a paper which I think has grossly misrepresented the profession.

On the first pages of the *Journal of the American Medical Association* for June, 1894, is a short paper headed "Some Surgical Sins," the writer of which must speak from personal knowledge of a condition of things that every true lover of surgery who works for the best interests of his patient and the advancement of the profession would indignantly repudiate.

Why, then, this savage attack on the surgeons of the world? Are they any less honest or truthful than the writer of this paper which has been given such a prominent position in the organ of our national medical organization, a periodical which is supposed to represent the profession of the country and is the guide to many of the medical profession? I think these criticisms should be repelled.

Let us examine some of the statements of this champion of surgical honor and truthfulness. He says: "A very significant fact in the surgical literature of recent months has been the evidence of reaction against an over-hasty adoption of operative methods of treatment." I deny that the surgeons of this country ever recommended surgical treatment until they were convinced that operation was the only proper treatment. There is no evidence anywhere in surgical writings and reports that I can find of any change in the methods of competent surgeons in this or any other country, substituting medical treatment for surgical in any condition which they have selected for operative interfence. Those who are influenced

*Read before the Philadelphia County Medical Society, December 26, 1894.

by such statements may be guilty of operations for imaginary surgical conditions, something that no *surgeon* would be ever guilty of.

"The low death-rate of the new surgery made such a contrast with the mortality recorded in accepted text-books that the men who believe the new gospel, naturally the young, were enchanted by the safety with which they could operate for conditions that older and more cautious surgeons hesitated to so treat. Many of us have stood appalled at the temerity and astonished at the pathology of these operative members of the profession."

"The low death-rate of the new surgery." How strange that it should be the young who so quickly appreciate the wonderful improvements in surgical sciences and apply them to the wants of the suffering; and how much greater would be the surprise to know that any, no matter how they may have deteriorated in surgery, could go back and for one moment think of comparing success in abdominal surgery in saving lives in conditions tenfold more dangerous than those laid down in the so-called "accepted text-books" of the profession. Is it possible for any one who lays claim to a surgical education, who has devoted any time or consideration to the technique of abdominal surgery, to conceive of such mortality as laid down by the so-called "accepted text-books?" Would they not in turn stand appalled at the horrible record? From 25 per cent. to 75 per cent. of deaths in the so-called "accepted text-books" of abdominal surgery! The time may come when the older surgeons—those who have devoted their entire lives to not the one branch of surgery, but to the whole seven branches of medicine as laid down by our schools, and have attempted to be able and efficient teachers and operators in every specialty now recognized by the surgical world; those who have operated for cataract, for fissure of the bowel, for carotid aneurism, for ingrown toe-nail, for hysterectomy and for every operation in the known catalogue of surgical diseases, and claimed to be proficient in all alike (and no doubt they were)—will recognize the fact that the eye surgeon should have special preparation and opportunity, and should devote himself for many years to this specialty alone, before he is competent to perform operation for the relief of disease requiring operative interference, and that in the same way is special work, devotion and consecration needed in the other branches. I heartily indorse the idea that a man should have a general knowledge of medicine and surgery; that if he selects a specialty, it should be in the direction that most pleases and interests him. From these facts alone he will do better work, be a more competent operator, take more interest in his patients, and give more attention and care to every detail to acquire perfection in his specialty.

"Look at the dozens of operations by me this year without a death," says the operator. His less enthusiastic neighbor thinks of the proverbial kinds of falsehoods, "lies, damned lies and statistics."

When we remember that the writer of this short description of the surgical enthusiast refers to those of the profession who claim more for their reported work than did the writers of the so-called "accepted text-books" of surgery, this statement is truly appalling. So far as I know the entire profession repudiates the old statistics of the so-called "accepted text-books" of surgery and claims a much lower death-rate than do they, and I do not think that the profession at large doubts that the great majority of operators are honest and truthful in the report of their work. I believe with Dr. Roberts, that no man in our profession should be guilty of reporting his cases save with the most absolute accuracy. I believe the medical profession to be many degrees less addicted to untruthful and dishonest misrepresentations than any other calling which men accept as their life-work. I think with Dr. Roberts, that "liar" should be properly stamped on the man misreporting his work, but one should not brand the whole profession with falsehood because some happen to devote their lives, their energy and their money to one of the seven branches of medicine, in order that they may the better understand and care for the patients intrusted to their care. Mr. Tait has done over one hundred operations without a death—the most desperate along with the most easy; Mr. Keith reports dozens of the most terribly neglected cases of hysterectomy without a death; Joseph Price has done more than a hundred operations as they come in abdominal surgery without a death; and

there are many other operators in this country, with many dozens of operations to their credit, without a death to tarnish the record. Why, then, this charge of falsehood? Can Dr. Roberts give the name of a single surgeon of any reputation that this shameful charge will fit?

"Demanding unusually large fees for professional services is a surgical sin which the increasing number of skilled surgeons is happily correcting. To send a bill for a large amount simply because a patient is wealthy does not appear to be just, and to obtain the money because the patient is in fear of death and dare not employ a less experienced attendant, makes one think of the methods of the footpad, who demands your money or your life."

For skiled services in the arts and sciences, in medicine, surgery and the law, in painting and the ministry, it has been the rule the world over since the world began for the better class of all workers to be paid in proportion to skill. The painter demands, in proportion to his reputation and skill in the art of painting, many thousands more than his less skillful rival. The poor man pays $5 at the bazaar for the horse which will answer his purpose; the rich man, for one that will meet his requirements, pays $150,000 and thinks himself fortunate in his possession. For the surgeon to value his services to the rich and poor alike would be an injustice both to the profession and to the patient. Fortunately for the surgeon, the rich do not expect any such moderation. I have always found that the most grateful people I have had the pleasure to attend have been those from whom I have demanded very large fees and those from whom I demanded no fee at all. In abdominal surgery, the proportion of those who pay nothing to those who pay a fee is about as ten to one. No abdominal surgeon that I know of ever refuses to go to the relief of a patient demanding his services, and to go entirely irrespective of whether or not there will be a fee. When this is considered on the one hand, and on the other Dr. Roberts' charge that the surgeon uses methods in common with the footpad, demanding the money or the life of the patient, one cannot but feel that the imputation would be both offensive and disgraceful coming from a citizen who owed a bill to a surgeon, but from one of our own profession it is adding insult to injury.

"Due regard is not given by us to the influence of the nervous system upon the health. Many patients can be cured by medicine or psychic remedies of symptoms that would induce some surgeons to resort at once to mutilating operations. This statement does not apply alone to pelvic conditions, but to affections of joints, muscles and viscera."

If Dr. Roberts had indicated that want of consideration of nervous symptoms obtained in disease in general instead of in surgical conditions only, we might think the charge worthy of serious notice; but when it is said that the surgeon does not properly consider the nervous element I must beg to differ with him. The surgeon has no excuse for such a mistake, nor for accepting nervous symptoms as reason for any surgical operation. If the operator can find nothing but nervous phenomena—no pathological changes, no tumor nor deformity of parts to warrant interference—he has no cause for operating. The patient should be treated for the condition present and not one manufactured by the attendant to fit his notion of treatment.

The system of medical education in the United States, in laying so much stress on the complications and dangerous conditions to which all patients are exposed, leads the student when he leaves college to suppose that his very first case will be a Waterloo. He has been taught in some of our colleges so many dangerous complications in midwifery and has learned of so many frightful operations that in his estimation scarce one patient in a hundred can escape mutilation for her relief and delivery. This city alone yearly sends out a half thousand young men and women, so many of whom have been constantly listening to this dangerous side of medicine and surgery that we cannot wonder that so many operations are thought of, talked about and considered by the young attendant and that so many mistakes are made by him through overanxiety and misapplied interpretations of symptoms. Every year lessens the dangers to the patient in this direction and gives us a set of men in the community that we can depend on and believe them when they say that an operation is demanded, that there is no other way to

have perfectly healed, to be amply covered with a soft pliable integument permitting complete flexion and extension, pronation and supination; indeed, but that it is not quite so strong as the right arm, to have its functions entirely restored.

CASE II.—Anton D., thirty-three years of age, a fireman, was brought to the Episcopal Hospital October 25, 1892, with a railroad injury of his left foot. The extremity was so caught beneath the wheel that it had been completely flayed, but as none of the integument was lost it was brought together by sutures. Sloughing, however, occurred of the entire skin of the foot and ankle. December 4th a flap 2 inches wide was dissected from the sound limb, from the lower portion of the thigh to the lower third of the leg, a distance of 14 inches, its base being left attached at the lower part. Carrying the lower portion along the outer side of the foot from before backward, the flap was reflected upon itself around the heel, and its remaining portion carried forward on the inner side of the foot to the toes. It was retained in this position by sutures carried deeply enough through granulation tissue to take a firm hold, and through the reflected lower borders of the flap occupying the sole of the foot. With a Y-shaped splint ingeniously devised by Dr. Ferguson, which kept the injured foot in a state of absolute fixation to the calf of the leg on the sound side, the patient, with remarkable fortitude, kept his limbs in this constrained position for over three weeks (22 days), when the base of the flap was detached, the latter having become firmly adherent to the foot. Advantage was taken of this opportunity to gain a little more integument by dissecting the flap further down the leg instead of cutting it off level at the foot. The patient remained in the hospital 657 days, at the end of which period he walked without a cane and with a foot whose function was sufficiently restored to enable him to resume his laborious occupation of fireman on a vessel. The foot will be seen to be a very useful one, its plantar aspect being covered entirely by leg skin, as shown by the growth of hair upon it.

It will be observed in both of these cases that there is a singular freedom from the constriction of a tightly drawn peripheral cicatrix, œdema, impairment of function and other evidences of impeded return circulation. This factor alone places this method of closing large circumferential ulcers far in advance of the method by skin-grafting. Though the method of Thiersch and others, of allowing the flaps before severance at one or both extremities to become granulated, would have been applicable to the case operated upon six years ago, it is very doubtful if so long a flap as that transplanted in the other case would retain its vitality throughout its length, even if left attached at both ends.

PHLEGMON OF THE STOMACH.

WILLIAM VISSMAN, M.D., LOUISVILLE, KY.

A pathological specimen which will be of interest on account of the rarity of its like, if for no other reason, is a section of a stomach taken from the corpse of a laborer's wife.

The ante-mortem diagnosis was doubtful. However, carcinoma planum was supposed on account of age, fifty years, absence of hydrochloric acid in gastric juice, slight icterus, complete anorexia, vomiting, pain in epigastric region, no tumor, nourishment very bad. These conditions, with a history of a general indisposition for some time before entering the hospital, were the cause of the suspicion of the attending physicians.

The post mortem showed very slight thickening of endocardium, hypostasis in lungs slight, hyperplasia of spleen and cloudiness of liver and kidneys. Stomach was empty, walls about half-inch thick, and this thickness was continuous throughout the organ and extended a slight distance (about one inch) up the œsophagus.

The mucous membrane was thickened, pale and œdematous; the submucosa was

impregnated with a somewhat opaque, yellowish, gelatinous fluid which exuded on slight pressure. There was no other center of suppuration to be found in the body.

The microscopic examination of the stomach showed the greater part of the thickening of its walls to be due to the infiltration of the submucosa with pus. Not only is the submucosa infiltrated, but this infiltration follows the connective tissue throughout the entire walls. In other words, we have a phlegmon of the stomach enveloping the entire organ.

This condition can only be brought about in one of two ways, by metastasis or by direct infection, and when due to metastasis, as is very often the case in puerperal sepsis, is generally circumscribed (abscess of stomach). However, this is not necessarily the case.

Direct infection may take place from external injuries, as in Silcock's case after gastrostomy ("Trans. Lond. Path. Soc.," 1883), or it may take place from the inner surface, particularly after partaking of infected food. This mode will appear just a trifle implausible because the gastric fluid is supposed to be an excellent disinfectant, but the experiments of Falks ("Virchow's Archives," vol. xciii), which were proven a year later (*Deutsche Med. Wochenschrift*, 1884, No. 20) by Frank, show that the gastric fluid does not affect the power of proliferation of the tubercle bacillus. In the event that the patient lives until the phlegmon advances far enough to form abscesses, it is evident that the mucosa will be undermined to a great extent and very apt to become necrosed and cast off, as was reported by Laboulbene (*Bull. de l'Acad. de Med.*, 1876). This case was due to sulphuric acid, and two weeks after the ingestion a membrane 20 by 12 cm. was cast off.

These cases are sometimes diagnosed by finding large quantities of pus in the vomit.

Instead of forming a large abscess the mucous membrane may be perforated in a large number of places, but in either event it is very doubtful if any recovery has taken place.

As for symptoms and treatment, from the morbid anatomy they are obviously those of general sepsis. As to the frequency of these cases, I can add nothing to Rokitansky ("Lehrbach der Pat. Anat.," 1861), who says they are very rare. I have seen only this one among more than 10,000 post-mortem examinations; and Delafield and Prudden in 1892 report having seen only one case.

Painful Peritoneal Adhesions.

Nicaise (*Revue de Chirurgie*) states that the use of antiseptic methods and the consequent development of antiseptic surgery have made surgeons better acquainted with peritoneal adhesions and have led to their successful treatment by operation. These adhesions may give trouble by disturbing the function of implicated organs and by exciting pain. The pain varies in character and intensity in different cases. It may be caused by displacement of organs to which the adhesive bands are attached or by constriction of the intestinal canal. The pains in the latter condition are often very severe and of a similar nature to that of hepatic and renal colic.

The diagnosis of peritoneal adhesions is often very difficult. In some cases their existence can only be assumed by the process of exclusion, while in others their certainty can only be demonstrated by an exploratory operation. The author is of the opinion, however, that a diagnosis can be made in many cases by close inquiry concerning such details as previously occurring abdominal inflammation, the seat of pain, and the relation to the seat of any previous inflammation, the time when the pain comes on in regard to the taking of food.

As many peritoneal adhesions become longer and thinner and have a tendency to disappear, there should be no great hurry in having recourse to an operative procedure. When, however, they cause great pain, a laparotomy should be performed and the adhesions broken up. The cure that will thus be effected will be permanent and complete.

Chloroform Treatment of Phthisis.

In the *Jour. de Med. de Paris* Mr. Potter urges that by the inhalation of chloroform the bacillus of tuberculosis is destroyed *in situ*. It is not necessary to produce anesthesia, but short of this inhalations should be employed at brief intervals daily for a considerable period.

CORRESPONDENCE.

THE INJECTION TREATMENT OF HERNIA—REPLIES TO INQUIRIES.

EDITOR MEDICAL AND SURGICAL REPORTER:

Inquiries for further information regarding the injection treatment for hernia have become so frequent that I am compelled to answer through the columns of THE REPORTER.

First, as to the truss and its application. For scrotal hernia I prefer what is known as the "German scrotal truss." This is a soft padded truss easily adjusted and easy to the wearer. A perineal strap keeps it well in position. I have held old ruptures with this truss that could not be retained by any other form. Still, for an all-around truss the Hood pattern is probably the most satisfactory. Either of these may be obtained from the dealers. It is important in fitting a truss that it does not press upon the pubic bone. The pad should rest just above it. The spring of the truss should not press upon the body, but be bent so as to be perfectly comfortable, pressure being exerted only on the pad over the hernia and on the disk at the back; this pressure being only sufficient to keep the hernia well in. If such pressure produces excoriation, wash the parts with dilute alcohol, dry thoroughly and dust with stearate of zinc. Repeat as often as necessary.

Taxis.—The text-books give quite full instructions, to which the reader is referred. Taxis should not, however, be practiced for over fifteen minutes at a time with any patient. Let the patient rest for awhile and repeat; but it is better not to make too many attempts at reduction on the same day in obstinate cases. Prolonged taxis in any case is dangerous.

If strangulation has occurred and the bowel seems to be filled with gas, some operators recommend that it be punctured with a small hypodermic needle, detached from the syringe, and the gas allowed to escape. I see no objection to this procedure. Ice may be applied in strangulation, or a little ether poured over the parts. The ether by rapid evaporation produces intense cold which rapidly contracts the parts, frequently allowing of reduction.

The positive pole of a galvanic or a faradic battery has been successfully used with the negative at some other point. Contraction is caused and possible reduction.

Morphine, $\frac{1}{4}$ gr.; atropine, $\frac{1}{150}$ gr., and hyoscyamine amorphous, $\frac{1}{125}$ gr., combined in one hypodermic injection, has been used with prompt effect in strangulated hernia. Dosimetric granules of these alkaloids are a very convenient form for such administration. They are very soluble and a little dozen-vial case containing as many varieties, one hundred of each, is easily carried in the vest pocket.

Coughing Taxis.—Dr. Wherry, in the *Lancet*, says that he has frequently found that coughing on the part of the patient during taxis was a great aid in the reduction of hernia. He cites a case of femoral hernia, severely strangulated, in a middle-aged woman which he succeeded in reducing by gentle taxis continued for fifteen minutes, the patient coughing continuously. Two other physicians, aided by chloroform, had previously failed to reduce the hernia. This method is easy and safe and well worthy of trial before any other attempts are made.

"How shall I know when the patient is cured?" In an ordinary case one week after the sixth injection has been properly made the patient may stand, the truss be removed and the parts carefully examined to see if there be any signs of a protrusion. The patient may give a slight cough, which will give an impulse differing in character upon the two sides if there is still a hernia. With the finger these impulses may be readily differentiated after a little practice. If the hernia seems to be well, allow two weeks to pass, when another examination should be made. Of course the truss must be worn as usual, and finally not laid aside without the consent of the operator.

In one month after the last injection you will be able to determine whether further treatment is necessary. There

may be a weak point that needs reinforcing. Keep the patient under observation for at least six months, with monthly inspections, in order to prevent a relapse through carelessness on his part. He should not be allowed to put undue strain upon the parts until they are thoroughly healed.

The operation for femoral hernia is practically the same as for the inguinal variety: reduce the protrusion, follow up the canal with the trocar and canula needle, and proceed to obliterate it by producing the proper amount of adhesive inflammation.

The object aimed at is to close up the opening by which the bowel leaves the abdomen, whether this be femoral, inguinal or umbilical.

For these operations only a suitable trocar and canula needle and a proper fluid should be used. Safety and success depend absolutely upon those two requisites. The skill to use them is readily acquired.

The injection method has established a permanent position in the treatment of reducible hernia, and the percentage of cures is greater than by operative procedure if proper instruments and fluid be used. Progressive physicians all over the country are adopting it with good success.

W. H. WALLING, M.D.

Philadelphia.

VALVULAR HEART DISEASE, WITH PARTICULAR REFERENCE TO THE USE OF STRYCHNINE.

In the opinion of Dr. Meffler (*Med. Record*), medicines should be dispensed with in valvular diseases of the heart as long as compensation is complete and hypertrophy does not provoke any marked secondary symptoms. Absolute rest is, of course, of prime importance. There should be regular hours of rising and retiring. The daily exercise should stop short of producing fatigue. The mind should be cheerfully occupied. He advises simple nutrition, without overloading the stomach; hence frequent small meals, rather than heavy dinners; very little fat, sugar and succulent vegetables; let the patient partake of nitrogenous, albuminous food, and abstain from stimulating drinks.

When dyspnœa and vertigo set in after failure of compensatory hypertrophy, strychnine in small and frequent doses, in the author's opinion, best supports the heart's action, while the general tonic treatment should be used in conjunction. Thus iron, arsenic and vegetable bitters, together with heart-tonics, should be given.

The author regards digitalis still as "the" remedy when alarming dyspnœa and incipient dropsy make their appearance; but the digitalis or strophanthus should be withdrawn when beneficial results have been secured. But the nutrition of the heart is most steadily and greatly stimulated by small doses of strychnine. Small doses of nux vomica are also often administered with success. Caffeine is considered as more of a diuretic than a cardiac tonic. Coronilla is said to be slow in its action and not always certain.

The author sums up his experience in treating cases of valvular heart disease as follows:

Physical rest, associated with light, regular, pleasurable exercise; absence of all worry, mental anxiety and sudden emotion; plain, abundant, nutritious diet, as dry as possible; absolute avoidance of all stimulants; the use of general tonics and hydropathic measures conducive to the building up of the general constitution; for the heart, the continuous use of small doses of nux vomica or its alkaloid, reserving the more powerful heart stimulants, like digitalis, for threatened dropsy. In some cases better results were obtained from the combination of digitalis, strophanthus and convallaria than from either alone. In others it was found that either of these special heart-tonics alone produced the greatest comfort when assisted by minute doses of strychnine. It is bad treatment to use larger doses of any drug than is absolutely necessary; and ofttimes three to five drops of digitalis with $\frac{1}{100}$ or $\frac{1}{60}$ grain (0.6–1 mlgm.) of strychnine will act better than the larger doses of either alone. The use of strychnine alone is, in the majority of these cases, the best for prolonged treatment.

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SATURDAY, JANUARY 19, 1895.

EDITORIAL.

THE ORIGIN OF SEX.

There was once a notion that a woman by eating a lily, the symbol of purity, could become pregnant without the help of man. Notions as to the origin of sex having no more scientific or rational foundation have been held—indeed, positively declared as true. Thus Melanchthon, in the sixteenth century, asserted: "Males come from the right side of the womb and originate from semen from the right testicle. Females come from the left side of the womb."

Part of Melanchthon's theory was as old as Aristotle, who asserted that the right testicle produced boys, the left girls, and has told how Leophanos made the production of males or of females at will in his domestic animals by tying the testicle he wished to render sterile.

An old opinion still held by some asserts that the sex depends upon the relative preponderance or predominance of male or female at the time of fecundating coition. Debay has observed that this opinion, however satisfactory it may seem at the first glance, does nothing but point out the effect and is silent as to the cause. The words preponderance and predominance do not prove in what manner the ovum and the sperm, which have no sex, can give it to an embryo.

According to Mantegazza, the theory just mentioned has been upheld by the Chinese. They say that if the strong principle, *yang*, dominates in the male and the feeble principle, *yu*, in the female, a boy is born, while a girl comes in opposite conditions.

Debay maintained that the determination of male and female depended upon the greater or less nitrogen contained in the material of which the ova and the zoösperms are formed. In order that a male may be begotten the wife must for twenty or twenty-five days be restricted to substantial and nitrogenous food. With-

out mentioning the details as to her diet, we state that the author directs for the husband an opposite regimen—in fact, for the time he becomes a vegetarian. The last (the 166th) edition of Debay's work, "Hygiene et Physiologie du Marriage," was published in 1893, and the first twenty years before. We have quoted the directions more especially because a somewhat similar regimen for the same purpose was recommended two or three years ago by a German physician in the *Centralblatt f. Gynäkologie.* Echoes are more numerous than voices!

Thury's law determining sex in animals has not been proved to hold in human beings. A French physician, Mestivier, has stated that woman furnishes a male ovum one month and a female the next. Now, observing what month the first child is born in, the sex of subsequent births can be predicted, for supposing the child to be born in January and male, January and alternate months are male months for that mother, while girls will be born in February and its corresponding alternate months; properly the male month or female will be nine months before the birth.

Of course it is well known that the proportion of boys to girls is about 106 to 100, and that this preponderance is less in cities than in the country. It has been suggested that the excess of male births is in part to be attributed to the fact that in almost all families a son being desired, once such birth occurs, Malthusian moral restraint is invoked so that there is no more increase in the family. Physiology is utterly silent as to why more males than females are born.

In old primiparæ the excess of male births greatly increases, 140–160 to 100. It has also been observed that in new colonies in which not only young women, but also those that are old, readily marry, male births are also in great excess.

From some writer whose name escapes us for the moment we have the following statements: "A hundred ewes extremely well fed will produce a larger percentage of ewe lambs, while a hundred ewes poorly fed will produce a larger percentage of rams. After a war or a famine there are more human males born; in times of plenty and in the upper circles, more females."

In Drummond's "Ascent of Man" we find the following: "Starting with the function of nutrition as the nearest ally of reproduction, the newer experimenters have discovered cases in which sex has been apparently determined by the quantity and quality of the food supply. And in actual practice it has been found possible, in the case of certain organisms, to produce either maleness or femaleness by simply varying their nutrition—femaleness being an accompaniment of abundant food, maleness of the reverse. When Young, to take an authentic experiment, began his observations upon tadpoles, he ascertained that in the ordinary natural condition the number of males and females produced was not far from equal—the percentage being about 57 female to 43 male, thus giving the females a preponderance of 7. But when a brood of tadpoles was sumptuously fed the percentage of females rose to 78, and when a second brood was treated even more liberally the number amounted to 81. A third experiment with still better food gave 92 females and only 8 males.

Undoubtedly these and similar experiments will bring some light to one of the darkest problems in physiology, the origin of sex in the human race, but that they will drive away all the darkness we may doubt.

The Source of Danger.

Doctor—You mustn't stay out late at night.

Patient (a married man)—Is the night air bad for me?

Doctor—No; it's the excitement after getting home that hurts you.

ABSTRACTS.

DIAGNOSIS OF DIPHTHERIA.

Special announcement from the Laboratory of Bacteriology of the Philadelphia Polyclinic. As the early diagnosis of diphtheria from other pseudo-membranous affections of the throat has always been a matter of difficulty and in some cases of absolute impossibility, the consensus of opinion is that it can be made with certainty only by a bacteriologic demonstration of the presence or absence of the Klebs-Loeffler bacillus. Furthermore, the question of the association of other pathogenic and of pyogenic microbes with the Klebs-Loeffler bacillus is of importance in prognosis. In view also of the introduction of the blood-serum therapy, an early and absolute diagnosis is imperative in testing the efficacy of such treatment.

The Laboratory of Bacteriology of the Philadelphia Polyclinic is ready to undertake this examination and to report to physicians the bacteriologic diagnosis of suspected cases. Sterilized swabs and blood-serum tubes, together with instructions for the method of procedure, can be obtained at the laboratory or from Mr. W. S. Leffman in the faculty's office. The results of the examination will be reported within twenty-four hours from the time of the return of the tubes. *This service is gratuitous.*

TREATMENT OF GASTRIC ULCER.

Milk has been and still is the most important dietary food for patients suffering from gastric ulcer. Rest, as in most diseases, is another principal factor in the treatment. Dr. M. Einhorn describes the Leube-Ziemssen "rest cure," now so popular in Europe, as follows:

The patient is kept abed for two to three weeks. He is poulticed during the day with flaxseed (warm) over the stomach and the upper part of the abdomen; at night a priessnitz (wet linen cloth) is applied over the same area.

The diet consists of liquids—milk, milk with strained barley, oatmeal or rice water, plain water, weak tea and peptone (one teaspoonful to a cup of water). During the first week the patient takes half a cup (about 100 c.c.) of either every hour. Everything the patient takes must be neither very cold nor very warm, and should be taken slowly (sipping or with a spoon). During the second week the patient is given the same kind of food, with the only difference that he is fed every two hours, and a cupful or a cupful and a half (200 to 300 c.c.) is given at one time. In the beginning of the third week the patient is fed every three hours; he is allowed barley, farina and rice (well cooked) in milk, soft-boiled eggs, crackers softened in milk—in addition to his previous food; on the third day of the third week the patient begins to partake of meat—first raw, well scraped, then broiled. Thereafter the patient is put upon the ordinary daily diet—excluding heavy salads, pastry, raw fruit and the like.

At the beginning of the third week the flaxseed poultices are discontinued and the patient is allowed to be up—first for a short time only (one-half an hour to an hour), then for several hours, and thereafter for the whole day. At the beginning of the fourth week the patient may begin to walk outdoors and slowly resume his wonted occupation.

Whenever the pains become associated with frequent vomiting or hæmatemesis, the author orders the patient to abstain from any food whatever, given by the mouth, for a period of five days. The patient is then fed by the rectum in the following way: Early each morning the patient receives a large enema of about a quart (or liter) of lukewarm water in which a teaspoonful of common table salt has been dissolved (cleansing enema).

About an hour after the patient has voided the injected water the first nourishing enema is given; the same may consist either of a glassful of milk (about 200 c.c.) in which a raw egg has been well beaten and a pinch of salt added, or of a cupful of water in which a tablespoonful of a good peptone preparation has been dissolved. The temperature of either must be about 100° F. (38° C.). Such a nourishing enema is given three or four times a day. The quantity of the feeding enema is 200 to 250 c.c., and it is slowly injected by means of a fountain syringe and a soft-rubber rectal tube. The patient frequently rinses his mouth with cold water, and is allowed from time to time to keep a small piece of ice in his mouth and to swallow the melted water. The five days being over, the mode of diet is the same as described above for the ordinary form of ulcer. In cases of hemorrhage from the stomach, the treatment is the same as in the severe type of ulcer, with the only exception that ice-cold applications are made over the stomach instead of warm poultices.

The author is of the opinion that there is, after the application of the "rest cure," hardly any need for constant medical treatment. Sometimes, however, he makes use of a small dose of codeine if the pains are very severe, and of Carlsbad salt if there is constipation. Only in cases where the ulcer is associated with a hyperacid gastric juice, he regularly prescribes an alkaline salt, as, for instance:

Calcined magnesia		1 part
Sodium carbonate	āā	3 parts
Sodium bicarbonate		
Peppermint oil sugar		

A tip of a knifeful every two hours.

The author then reverts to the two methods he employs for those patients who cannot undergo the "rest cure." One is the silver nitrate treatment, the other the bismuth treatment. In applying either of these two measures, the patient is allowed to attend to his business and partake of a light diet in which milk plays a great part.

1. The silver nitrate is given first.

Silver nitrate	0	3 gm.	grs. ivss
Distilled water	180	0 "	fl℥ vj

Dispense in a black bottle.
A tablespoonful in a wineglassful of water three times a day half-hour before meals.

After having used up this quantity the dose may be gradually increased—prescribing 0.4 to 0.6 gm. (6–9 grs.) of silver nitrate to 180 gm. (6 fl. oz.) of water. The silver nitrate may be used in the way mentioned for about two or three weeks and then discontinued. The pains, it is stated, usually disappear after the first week's medication.

2. In the bismuth treatment 3 to 5 gm. (45 to 75 grs.) of the subnitrate are given to the patient three times a day, suspended in water, half an hour before meals. It is best to have the patient lie quietly for about half an hour after having partaken of the powder. The bismuth treatment must be continued for about two or three weeks without interruption.

It is remarkable that these large doses of bismuth do not, as a rule, cause constipation. In all of the author's five cases the bowels moved every day without the aid of any cathartic during the whole time of the bismuth medication; and in four the latter proved very beneficial.—*Med.-Surg. Bull.*

Formalin for Chancroids and Venereal Warts.

Gaylord having tried formalin as a local application is a series of cases of this kind, reports (*Med. News*) his results as uniformly favorable. The best results are obtained by using full-strength solutions, and then one application is usually sufficient. The pain produced by the full strength (40 per cent.) is not markedly greater than that produced by any solution above 10 per cent. Pain, while excessive, can be deadened by cocaine, when it is probably not more severe than that caused by nitric acid. The drug should not be applied over large surfaces except in weak solution. When continued for a protracted period of time it tends to cause an intolerance on account of the pain produced.

Pruritus Ani Successfully Treated with Chlorinated Lime.

N. K. Berger (*Zemsky Vratch*) inserts into the anus, about one inch deep, a pledget of cotton soaked in liquor calcis chlorinate, which is left there until smarting occurs, when it is withdrawn and the anus bathed with the same solution. The operation is to be repeated. Swelling of the parts, concomitant dermatitis or eczema are said to be cured by a few applications.

THE NEW FIGHT AGAINST CHILDREN'S DISEASES.

Whereas in European cities the battle of the municipal and health authorities, so far as epidemics were concerned, was until a few years ago waged chiefly against small-pox, typhus and occasional outbreaks of cholera, it is now considered that the victory has in the main been won against these bolder and grosser enemies of the race, and the conflict has set in against the diseases which are hostile to child life. Scarlet fever and diphtheria are the chief of these children's maladies, with measles as a less dreaded but extremely mischievous third. Thus far the weapons have been mainly those of vigilant, never-ceasing inspection, immediate isolation, disinfection through the aid of highly organized official disinfecting staffs, and in general the sharp blocking up of those avenues through which infection is most likely to be communicated. The difficulty of perfect isolation in tenement-houses has led to the great extension of public hospitals for the reception of children ill with diphtheria, scarlet fever and measles. The great objects of the administrators of the public-health system are (1) to abolish the plague-spots which are the sources of infection and (2) when infection has appeared to prevent its spread. This of course is the sound policy to be pursued. But, (3) and concurrently, every possible effort is made to save the lives of the poor children actually seized with infectious maladies. If we are rightly informed with regard to the anti-toxine cure for diphtheria, its application is to be beneficial both as a preventive against attack and also, where not previously applied, as a remedy to be administered in the early stages of the disease. Its immediate interest naturally lies in its use as a remedy. A considerable amount of experience, tested in the light of comparative statistics, would be necessary in order to show the preventive value of such treatment, and even then it would be difficult to distribute the honors between a remedial specific of this kind and a generally efficient sanitary administration. As in the case of vaccination, no one could ever tell us conclusively what part the particular treatment has played, and what part improved conditions of public and private cleanliness have had in the gratifying diminution of the malady.

LONG-LIVED AMERICANS.

This Western hemisphere has many sorts of climates, but they all have in common this encouragement, in exceptional cases it is true, to great age. It has been supposed that the exceedingly variable and violent climate of some regions of our country is hostile to long life. But if we study the matter in view of multitudes of instances, we see that it is not climate, or even hardship, that shortens life in the United States, for instance, but that it is worry and care, or, in other words, the furious pace at which we try to live. No attempt is made to defend the climate of New England, and yet the number of people who have attained a great age in it is positive proof that the climate is not altogether in fault for mortality. It is probable that the record would be very different if we had paid as much unworried attention to growing old as we have to fighting Indians, subduing forests, making money and getting ahead of our neighbors. We are still as a nation very young, some physical conditions have been against us, and there has not yet been time enough to spare to show what the country can do for us in the way of longevity. In New England they are less than three lives from the landing of the Pilgrims. Among the Pilgrim records at Plymouth is a letter from Peregrine White, who was born on the *Mayflower* when it lay in Provincetown—the first white child born in New England. Following that is a letter from an estimable Pilgrim deacon, who lived to be 106 years old, and who testifies that he knew Peregrine White. Following that is a letter from a lady still living, at the age of 92, who says that she remembers the aged deacon of 106 years. Thus less than three lives takes us back

to the Landing and to the Rock, which is almost as mysterious as the aerolite, or black stone, in the Kaaba at Mecca, since it is like no other piece of granite on the Massachusetts coast. It may be mortifying to see that we have no greater antiquity than this, but the efforts of three persons to cover it is encouraging.

But it is in other regions of the continent that we must at present look for the extraordinary capacity of the New World for producing old people. Well-authenticated are cases of mission Indians in southern California who reached the ages of 120, 130 and 140. In that equable region all the great functions of nature go on with regularity, so as to induce a long running of the machine. But besides this, these old men were probably free from care, from religious doubts and skepticism and political worry and ambition, and it is testified that they were simple in their habits, temperate, and even abstemious, drinking only water and eating little but corn, which they fitted for digestion by the vigorous action of their own grinders. Lieutenant Gibbons found in a village in Peru 100 persons over the age of 100, and either he or another credible explorer there reports another man aged 140. He was a very temperate man, ate his food cold and never ate meat except in the middle of the day. In the highlands of South America the habit of old age is a long-established one. In Ecuador centenarians are common. The census of 1864 found in the town of Pilaguin, 11,000 feet above sea-level, about 2,000 inhabitants, among whom were 100 over 70 years of age, 20 about 80, 11 over 90, 5 over 100 and 1 who was 115. Not many years ago there died in Ambato a woman named N. Cucalou, who was 114, and one Don José Soto aged 120. In the year 1840, in the town of Baños, died old Morales, a vigorous carpenter to the end of his life, who was well on in years and the steward of the Jesuits when they were expelled from their property in 1767. In 1838 a witness in a judicial trial was proved to be 140 years old, having been born on the night of the great earthquake which destroyed the old town of Ambato in 1698. How much longer this man lived, who was cradled by an earthquake, is not yet reported. Mexico, notwithstanding its revolutions, is equally favorable to longevity. In the State of Vera Cruz there died a man in 1893 who was 137 years old. That he was carried off prematurely we have reason to suppose, for at Teluca, where the register is officially and carefully kept, there died only a few years ago a man aged 192.—*Harper's Magazine.*

Public Health Service.

Whatever then may be the merits of anti-toxine as a cure for diphtheria, there can be no mistake in the policy of public cleanliness and of constantly improved health administration. Our American cities come short of their European contemporaries in most points of municipal organization and service. Fortunately, in the matter of public health work we have less to be ashamed of than in almost any other particular. There have been some scandals in the Health Department of New York City, but there has been very much to commend. All that is needed to bring our American municipal health administration up to a point of scientific and practical efficiency equal to that of the very best managed foreign cities, is a reform of our municipal government in general respects. The work of health boards is necessarily hampered at many points by the existence of corruption, of spoils methods and of ignorance and inefficiency in other departments of city government.—*Review of Reviews.*

The Treatment of Hemorrhoids.

Dr. Claude A. Dundore has an interesting article on the treatment of hemorrhoids in *Mathew's Quarterly* in which he presents the following conclusions, based upon a large correspondence with American surgeons:

1. The ligature is the safest method, as there is less likelihood of its use being followed by hemorrhage, strictures, or ulcers.

2. The clamp and cautery causes less pain and a shorter convalescence, but hemorrhage and stricture of the rectum may very often follow its improper application.

3. Whitehead's method should be limited to those cases in which the entire circumference of the anus is involved. In ordinary cases of one or more hemorrhoids it should never be used.

4. Simple dilatation of the sphincter, injection of carbolic acid and Manley's method are merely palliatives.

SOCIETY REPORTS.

PHILADELPHIA ACADEMY OF SURGERY.

Meeting of December 3, 1894.

Dr. H. R. Wharton exhibited

A DUMB-BELL-SHAPED CALCULUS WHICH HAD BEEN PARTIALLY ENCYSTED REMOVED BY LITHOTOMY.

This calculus was removed from a child five or six years of age. I show it, as it is of interest in connection with the choice of operation for the removal of calculi from the bladders of children. This patient was brought to the Children's Hospital and on examination I found a stone in the bladder. I hesitated some time as to what operation I should make use of. I was inclined to do litholapaxy, but when the child was etherized I made a rectal examination and felt a prolongation of the bladder into the rectum containing the stone. I decided then upon lateral lithotomy, and after exposing the stone and attempting to grasp it, I found that it was impossible to remove it, as the posterior portion was thoroughly surrounded by the walls of the bladder. I dissected it out with my finger without breaking it. The patient after the operation did perfectly well. I believe that in a case of this kind it would be impossible to do litholapaxy, for while the projecting portion of stone could have been grasped and crushed, the encysted portion could not have been reached.

I have had very little experience with these partially encysted stones, but in two of the cases that I have recently seen I have found that a great deal can be learned by rectal examination. In the previous case I was able to make up my mind pretty clearly as to the shape and possible attachments of the stone. I show the specimen mainly for the purpose of calling attention to the difficulty of crushing stone under such circumstances. I have done litholapaxy in a child five years of age. The operation is a satisfactory one if you can completely crush the stone. In the case mentioned I used a No. 16 lithotrite and had no trouble in crushing and removing the stone. The day after operation the urine was clear and the temperature was normal. The patient made a satisfactory recovery. Some time ago I assisted a friend in a suprapubic lithotomy where much the same conditions were present as in the case which I have reported, the posterior portion of the stone being imbedded. In such a case the attempt to do litholapaxy would have resulted in an incomplete operation.

DISCUSSION.

Dr. J. Ewing Mears: Dr. Wharton has presented a very interesting question. I think the experience of lithotomists points to the view that in children and in elderly persons the cutting is a safer one than the crushing operation, for the reason that in children the urethra and bladder being small, there is some difficulty in the manipulation, and in elderly persons there is danger in many cases of disease of the bladder or kidneys.

It will be remembered that when Napoleon III was operated upon for stone by crushing and death supervened, the question was largely discussed, and it was thought if lithotomy had been performed in his case the result might have been different.

Dr. Thomas S. K. Morton: As bearing upon the question of the choice of operations, it may be of interest to recall an article which recently appeared upon the subject of litholapaxy in children by Surgeon-Major Keegan. Major Keegan believes that litholapaxy is the ideal operation in children, where one can drill himself properly in the procedure, but that for those who have occasion to operate but seldom, the cutting method is far safer. His statistics, running up into

hundreds of cases, show an astonishingly low mortality. Before adopting the crushing operation in children he had cut in innumerable cases. I think that this is the view that should guide us in this country, where few have an opportunity for extensive experience, as the affection is in most localities quite rare. Probably the cutting operation, either the left lateral or the suprapubic, will continue to be the safest operation for all save those who see many cases.

Dr. Wm. B. Hopkins reported

TWO CASES OF EXTENSIVE DESTRUCTION OF THE INTEGUMENTS WHICH WERE CURED BY TRANSPLANTING LARGE FLAPS.

(See page 91.)

DISCUSSION.

DR. J. EWING MEARS: I would like to ask Dr. Hopkins why, in the first case, he selected the Velpeau position rather than that at right angles? This would have given better opportunity for keeping the parts clean. An interesting point is in regard to the transplantation of large flaps to cover denuded surfaces about articulations. Both the elbow and the ankle in these cases show perfect preservation of function.

Some years ago I had under treatment a case in which a large denuded surface occupied the surface of the abdomen. It was the largest raw surface that I had seen up to that time. It followed a sloughing bubo from a non-infecting sore. When I was called to the case the ulcer reached from the crest of the ileum of one side to that of the other, and from the umbilicus to the pubes in the median line, and on the right side, where it had originated, it extended three or four inches down the anterior surface of the thigh. It required ten months for this surface to entirely close. The ulcer was finally covered with a cicatrix which was not very tense. Occupying the region it did, it was not so necessary that it should possess the properties which we see in the cases which Dr. Hopkins has presented, where the ulceration occurred in connection with articulations.

DR. HOPKINS: In reply to Dr. Mears I would say that it was desired to take the flap from the chest rather than from the abdomen, and in order to secure the requisite length of flap it was necessary to bring the arm approximately into a Velpeau position.

Penis Vegetations.

Dr. B. E. Vaughan (*Amer. Medico-Surg. Bull.*) points out that vegetations on the penis are spoken of as venereal warts, but there is no necessary relation between them and venereal disease. They are usually multiple and may be pedunculated or flat. They are caused by the presence of irritating fluids or by simple lack of cleanliness; consequently they are usually associated with gonorrhœa or balanitis. Their usual seat is behind the corona glandis, on the inner surface of the prepuce and at the meatus. They may be few in number and small or large and numerous. Besides the uncleanliness and annoyance, their greatest danger consists in their possible change to malignant growth in the aged. Circumcision, with the removal of the wart-producing surface, is advised. If that is not practicable, use of the galvanic cautery after the warts have been removed with scissors, or the use of nitric acid followed by drying powders, *e.g.*, equal parts of boric acid, bismuth and calomel. If the warts are flat we may apply corrosive sublimate 1 dram to collodion 1 ounce.

Copper Arsenite in Therapy.

A number of cases are described by Dr. A. Hedlicka in which he employed copper arsenite locally, with almost universal success in the various acute and sub-acute inflammations of the mucous membranes, attended with pain, suffusion and more or less watery discharge. He found it most efficient in solutions of 1:50,000–100,000. These solutions are easily made by dissolving a $\frac{1}{100}$ grain pellet in $1\frac{1}{2}$ ounces of water; they are applied at intervals rarely longer than an hour (bladder, urethra and nose), and frequently not longer than from ten to fifteen minutes.

The remedy is rather indifferent in cases where the discharge is thick or persistent unless the affected surface be previously thoroughly cleansed.

The duration of the treatment ranged from a few hours to two or three days in mild cases, from several days to three months in severe cases. The author pretends to have never failed; relief being nearly always instantaneous, no other remedies were needed.—*N. Y. Med. Jour.*

THE LIBRARY TABLE.

BOOK REVIEWS.

ORGANIC MATERIA MEDICA AND PHARMACOGNOSY. By Dr. Lucius E. Sayre, Dean of the School of Pharmacy, University of Kansas. Philadelphia: P. Blakiston, Son & Co., publishers. 1895.

The work begins with a condensed but quite thorough discussion of structural botany, including vegetable histology. There follows a list of drugs,—officinal being distinguished from non-officinal by capitalization—classified according to the part of the plant, root, stem, leaf, etc., from which they are derived. When such a classification cannot be made the drug is distinguished as being an extractive, saccharine substance, mucilage, resin, etc. Then follows a description of drugs according to their arrangement in natural botanical orders, ending with a few animal drugs. Appendix A treats of insects injurious to drugs and Appendix B of organic chemicals prepared artificially. The work is copiously illustrated with 543 cuts, mostly original, and a system of numbering provides for ready reference from one part to another. As the book is designed more for the pharmacist than for the physician, only the briefest allusion is made to the action of remedies. The work is admirably adapted to be used as a combined text-book of materia medica, pharmacognosy, botany and microscopy in pharmacy colleges.

A. L. B.

TRAVAUX D'ELECTROTHERAPIE GYNECOLOGIQUE. Archives Semestrielles d'Electrotherapie Gynecologique fondees et publiees. Par le Dr. G. Apostoli, vice-president de la Societe Francaise d'Electrotherapie, etc. Vol. i, fascicules i et ii. Paris, 1894.

Dr. Apostoli, who may justly be termed the father of electrical gynecology, has in the present work undertaken a task of almost Herculean proportions Employing his own words, he has attempted to unite into one compendium, of which the present book is but the first volume of two fasciculi, all of the most important contributions that have from time to time appeared upon this subject. He has commenced the work by presenting some of the most important foreign contributions, all of which have been translated into French especially for this purpose. The succeeding volume likewise is to contain papers prepared by other than French writers, and the closing fasciculi are to be devoted to the contributions of eminent French electricians. A valuable feature of the work is to take the form of an appendix containing a complete bibliography of the subject. Dr. Apostoli has been induced to attempt the publication of a work of this magnitude in the hope that the cause of conservatism in abdominal surgery may be materially furthered, and that the number of useless and dangerous mutilations of the female genitalia may be considerably diminished. The material of the present volume is drawn from the pens of English, American, Russian, German, Canadian, Austrian and Italian authors, and includes the work of such eminent men as Lawson Tait, Thomas and Skene Keith, W. S. Playfair, Ephraim Cutter, Grailly Hewitt, A. Lapthorn Smith, Franklin H. Martin, G. Betton Massey, A. J. C. Skene, Paul Munde, Massin, Candia, Klein, Mandl and Laforest. It will be interesting to follow the successive volume of this work.

W. D.

PRACTICAL URANALYSIS AND URINARY DIAGNOSIS. By Charles W. Purdy, M.D., Queen's University. Philadelphia: The F. A. Davis Company, publishers. 1894.

Dr. Purdy calls his book a manual. In reality it should be called a text book, for though in description it is terse and concise, on close inspection it will be found full and complete. The great value of the book lies in the fact that the clinical significance of all substances found in the urine is brought in great prominence—a thing which has been neglected, or rather overlooked, in all the text-books on this subject that have been brought before the medical profession.

The writer has devised a new method for testing for albumin. It consists in the addition to the urine of salt solution until the specific gravity of the urine is raised ten or fifteen degrees. Next add to this solution in a test-tube two-thirds full one or two drops of strong acetic acid and boil the urine in the upper part of the tube. If albumin is present the upper part of the tube will be turbid, in contrast with the clear portion below. This test he regards as being the most accurate of all albumin tests. Second to it is the ferrocyanide test.

The author describes his own electric centrifuge for the precipitation of urinary sediments, the advantages of which are as follows: 1. It permits immediate examination. 2 Sedimentation is more complete and concentrated. 3. It affords a positive method for distinguishing between normal and abnormal crystalline sediments. 4. Micro-organisms like tubercle bacilli are found with greater ease and certainty.

There has been added a chapter, unique in that it has never before appeared in any work on the subject of the urine, and that is the examination of the urine for life insurance. The reason for this is very palpable. In spite of the fact that many companies issue minute instructions in regard to examination of the urine, a very large percentage of unprofitable risks arise through diseases of the kidneys which have escaped detection. He says that minute quantities of albumin are often observed in the urine of men at and beyond middle age who not only appear perfectly healthy, but who have, as a matter of fact, enjoyed the most typical robust health all their lives. The reason for this is that

chronic Bright's disease is nearly always the sequel to a robust life, the kidneys being the first organs to fail under the pressure of long-continued activity in the elimination of waste products which are excessive in those of great appetite and ample nourishment.

J. O.

LANDMARKS IN GYNÆCOLOGY. By Byron Robinson, B.S., M.D. The Physician's Leisure Library. Detroit, Mich.: George S. Davis. 1894.

This book is not a pretentious work on gynæcology; it simply deals with its "landmarks," such as anatomy, menstruation, labor, abortion, gonorrhœa and tumors.

Under anatomy the author describes the peritoneum and its inflammations, laying special stress on the points where inflammations begin, such as the Fallopian tube, appendix, etc.

Gonorrhœa and its widespread effects on the female genitalia are dealt with at full length on account of its importance, for every practitioner of medicine can call to mind cases in his own practice illustrating the fearful ravages of this disease.

The author has a very simple, and for practical purposes a very easy, classification of tumors, as follows:

I. Cysts.
II. Epithelial tumors.
III. Connective-tissue tumors.
IV. Dermoids.

He describes a new operation consisting "in ligating the tubes and ovaries (with removal if indicated) and ligation of the uterine artery as it courses along the sides of the uterus. The indications for the operation are (1) to avoid the removal of uterine myomata; (2) to aid in causing atrophy of the myomata; (3) to induce cessation of menstruation; (4) to check uterine hemorrhage. This operation will cut off the chief blood supply of the fundus of the uterus, and by it the shock attendant on hysterectomy, which is so often fatal in very anæmic patients, will be avoided." O.

A HAND-BOOK OF MEDICAL MICROSCOPY. By James E. Reeves, M.D. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street, 1894.

We have in this brief work a careful summary of the advantages of the microscope for use by the physician, who is informed, first, as to its importance in medicine, next what to buy when providing himself with an outfit, and how to go to work. The subject of bacteriology is well treated in a small space. The micrococcus Pasteuri is preferred to the pneumobacillus as being the true factor of the disease in croupous pneumonia. The examination of neoplasms is discussed at length, and the discussion contains just the amount of information required, without confusing the reader with unnecessary details. In examining the blood the author gives the stains that have but recently been brought into use He brings the book well up to date so far as medical progress is concerned.

J. O.

THE MEDICAL NEWS VISITING LIST for 1895. Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60-patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil and rubber. Seal grain leather, $1.25. Philadelphia: Lea Brothers & Co. 1894.

The Medical News Visiting List for 1895 has been thoroughly revised and brought up to date in every respect. The text portion (32 pages) contains useful data, including an alphabetical table of diseases, with the most approved remedies and a table of doses. It also contains sections on examination of urine, artificial respiration, incompatibles, poisons and antidotes, diagnostic table of eruptive fevers and the ligation of arteries. The classified blanks (160 pages) are arranged to hold records of all kinds of professional work, with memoranda and accounts. The selection of material in the text portion and the arrangement of the record blanks are the results of years of experience and special study. Equal care has been bestowed upon the mechanical execution of the book, and in quality of paper and strength and beauty of binding nothing seems to be wanting. When desired, thumb-letter index is furnished, which will save many-fold its small cost (25 cents) in the economy of time effected during a year. The list adapts itself to any system of keeping professional accounts.

INTERNATIONAL CLINICS: A QUARTERLY OF CLINICAL LECTURES ON MEDICINE, NEUROLOGY, PEDIATRICS, SURGERY, GENITO-URINARY SURGERY, GYNÆCOLOGY, OBSTETRICS, OPHTHALMOLOGY, LARYNGOLOGY, OTOLOGY AND DERMATOLOGY. Volume I, fourth series. Philadelphia: J. B. Lippincott Company. 1894.

This volume represents the collaboration of forty-two contributors, among whom are such men as Byford, Chapin, Cohen, Hunter McGuire, Mills, Rosewell Park, Hare, Sayre, Skene and Von Noorden, of Berlin.

The volume opens with an interesting memoir of Professor Charcot, written by M. Allen Starr and accompanied by an excellent lithograph of the distinguished physician and clinician.

Among the more interesting and strongly written articles are "The Treatment of Rheumatism," by A. Ernest Sansom, M.D., F.R.C.P.; "Pernicious Anæmia," by W. Hale White, M.D., F.R.C.P.; "Pott's Disease," by Lewis H. Sayre; "Affections of the Lachrymal Gland," by Simeon Snell, M.D., F.R.C.S. Edin.

Dr. Sansom defines rheumatism as "a morbid process whose manifestations are chiefly in the serous membranes of the joints, in the pericardium, endocardium, pleura and sometimes in the fibrous tissues in various situations (rheumatic nodules)" . . . "it is very rarely manifested for the first time after the age of thirty-five." He calls attention to the widespread fallacy that all painful affections of the joints are rheumatic, and mentions as

instances the non-rheumatic arthritis of blood deterioration and blood extravasation, as in scurvy, purpura, hæmophilia and the infective diseases, as syphilis, typhoid fever, gonorrhœa, influenza and scarlatina. He believes that the disease is due to a disturbance of metabolism whereby certain undetermined toxines are elaborated. His treatment of rheumatism of the joints is summed up in the use of the salicylate of soda, and in cases involving the heart the application over the præcordial region of the ice-bag. In protracted cases of rheumatism of the heart and its membranes he recommends the continuous galvanic current from the nape of the neck over the course of the great nerves in front of the neck for six minutes thrice daily, believing it to act upon the trophic mechanism of the heart.

"Pernicious Anæmia," by W. Hale White, is instructive, and he describes three cases in detail of this rare affection, one of which went to post mortem. He calls attention to the fact that the profound anæmia of obscure malignant disease, as of phthisis, is not infrequently confounded with pernicious anæmia.

The detailed report of these cases seems to disprove the belief that in this disease the percentage of red corpuscles always falls below the percentage of hæmoglobin. The only constant pathology at post mortem is an increase of iron in the liver, and if we cannot find this increase our diagnosis must have been incorrect. In one of his cases the iron amounted to over 1 per cent., or about twelve times the normal quantity.

Prognosis is always grave, even though temporary improvement is not uncommon. In two cases, however, the patients were apparently free from the disease at eleven years and four years respectively after treatment had been instituted.

Dr. Sayre, in his article on Pott's disease, emphasizes the mistake which many physicians make in treating this affection by the plaster-of-paris jacket in children under three years of age, as their narrow pelves give no support. The proper apparatus is the padded cuirass and jury-mast. He calls attention to the very practical point that in this disease the pain at first is often not in the back, but in the stomach, so that the case has been treated as one of indigestion.

Dr. Simeon Snell's chapter on "Affections of the Lachrymal Gland" describes several very interesting cases of such rare affections as acute suppurative inflammation of the gland and of adenoma, with photographs.

Altogether the book is one of the best of the series and contains much of interest to the physician, surgeon and specialist.

W. H. P.

ESSENTIALS OF ANATOMY. Including the anatomy of the viscera. Arranged in the form of questions and answers, prepared especially for students of medicine. By Chas. B. Nancrede, M.D. Fifth edition, with an appendix on the osteology of the human body; the whole based on the last edition of Gray's Anatomy. One hundred and eighty fine illustrations. Philadelphia: W. B. Saunders. 1894. Price $1.00.

The increasing demand for a concise arrangement of such a vast subject as that of anatomy has resulted in the publication of a fifth edition of this admirably arranged compend by Dr. Nancrede, and the addition of an appendix containing a full set of osteological plates has increased the usefulness of the work to an extent which we are sure will fully repay the publisher for his extra outlay of time and expense. W. H. P.

Anxiety as a Cause of Granular Kidney.

It is interesting, in relation to the ailment of the late czar, to recall a paper read by Prof. Clifford Allbutt at the annual meeting of the British Medical Association at Sheffield in 1876. The subject he took up was "Mental Anxiety as a Cause of Granular Kidney," and by an analysis of his case-books he showed what an abnormally large proportion of the patients showing symptoms of granular kidney had been subject to the depressing influence of prolonged anxiety. He says: "During the last two years I find I have made notes of 35 cases of granular kidney occurring in private practice, and I find a marked history of mental distress or care, or both, in 24 of them." This is a large proportion even if we admit that the pushing inhabitants of West Yorkshire worry abnormally concerning this world's goods. Several illustrative cases are given, and one especially in which, as a consequence of an unfortunate investment, a man in a good position for three years "went to bed night by night ignorant whether he might not be gradually drained of his all." Dickinson is in some sense in accord with Allbutt on this question, although not so positive. Prolonged mental disturbance, anxiety or grief as a cause of granular kidney is, he says, "perhaps problematical; the mode of its operation is not obvious, but must be surmised as through the nervous system. A lowering of nervous force is to be recognized at least as predisposing to every form of albuminuria. I have seen so many instances in which granular degeneration has been immediately sequent upon trouble that, in the absence of other causes, I am fain to conclude that mental conditions are sometimes concerned in its production."—*Brit. Med. Jour.*

Digital Compression of the Pneumogastric in Paroxysmal Tachycardia.

Dubois (*Sem. Med.*) has successfully employed digital pressure over the carotid region in a case of paroxysmal tachycardia. The patient was a woman, fifty years old, of nervous temperament, who suffered from frequent attacks of tachycardia, which lasted from five to fifteen hours and often terminated in collapse. In one of these attacks the author displaced the carotid a little toward the median line and made firm pressure over the pneumogastric area, with the result of reducing the cardiac pulsations from 140 to 96 per minute. The seizure was effectually controlled in ten seconds. Moderate compression is sufficient; too forcible pressure over the carotid region may produce syncope.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

Dr. George F. Jelly reports a case of

Mental Shock.

The victim was a married man, thirty years old, abstainer from liquor and tobacco, never subject to venereal disease and free from marked heredity to disease. He was usually in good health, but was nervous and excitable.

While walking one day on the railroad track his foot caught in an electric wire, and after falling he was barely able to throw himself outside the track in time to escape an approaching express train which passed a few inches from him. He rose and went home uninjured but somewhat excited, became rather more nervous in detailing the occurrence, slept poorly, woke early in the morning, seeming startled, and found himself unable to speak.

When seen the patient had marked tremor of the lips, tongue and hands, and on attempting to stand a tremor of the legs developed and made him unable to support himself.

Careful examination showed nothing abnormal, the pupillary and other reactions were normal, and ophthalmoscopic examination was omitted.

Any noise, particularly that of a railroad train, caused increase of disturbance and made the patient tremble as if afraid. The mind seemed to act sluggishly, but conversation was evidently understood.

By degrees improvement took place in all the symptoms and became more rapid as it progressed, until it was discovered about a year and a half after the accident that no occurrence that had taken place in the interval had made enough impression on the patient's mind to be remembered.

Improvement in memory began, so that the man could by degrees remember the occurrences of the previous day, then two days, etc., until finally he is able to remember some things that took place six months ago.

Suit was brought against the railroad on the ground that the wire was not properly placed, but was disallowed on the ground that the plaintiff had not exercised due care when on the track. No question of the genuineness of his condition was raised. He is still unfit for any work placing responsibility on him.

Osler divides these cases into simple neurasthenia, cases with marked hysterical manifestations and cases with severe symptoms indicating or simulating organic disease.

Other articles in this issue are "On the Occurrence of Lead in City Drinking Waters," by Dr. William B. Mills; "Cases Illustrative of the Diagnostic Value of Examination of the Blood," by Dr. Henry Jackson; "Some Observations on Tubercular Meningitis," by Dr. A. E. Austin.

IN THE PHYSICIAN AND SURGEON

for November Dr. Carl Bonning writes of

Appendicitis: Its Medical and Surgical Treatment.

The writer has had recoveries of about 80 per cent. of cases under the following treatment, without operation.

A diagnosis of probable appendicitis being made the patient is put to bed, with an ice-bag in the ileocœcal region. An attempt is made to move the bowels by a laxative if they have been constipated, but if mild measures are not successful no further attempt is made.

For the relief of pain powdered opium is given, and one-quarter of a grain every hour or two, gradually reduced to a quarter of a grain every three or four hours, is usually sufficient. A hypodermic injection of morphine sometimes seems preferable to the opium.

If under this treatment the symptoms abate the ice-bag will become irksome and may be laid aside, the strict liquid diet may be gradually increased, and if no movement of the bowels has taken place by the twelfth day an enema or a dose of oil may be given.

While giving due credit to this treatment, the author thinks it is apt to result in recurrent attacks, and favors surgical interference at a convenient time between attacks. When an operation is performed the appendix should be found, if possible, and removed.

Dr. F. Maas reports a

Case of Operation for Substernal Tumor.

The patient was a multipara, forty-six years old, who had suffered for six or seven years from attacks of dyspnœa caused by a goitre.

While awake the breathing was comparatively easy, but when asleep the dyspnœa became so great as to awake the patient or to lead members of the family to arouse her.

The veins over the tumor were enlarged to about the size of the little finger, and during the operation, in spite of double ligatures and hæmostatic forceps, the bleeding was very free from the entire surface of the tumor and led to the fear that the patient would die on the table.

While making traction on the mass a lobe about the size of a hen's egg was drawn from behind the sternum, relieving venous pressure, stopping the hemorrhage and exposing the great vessels of the neck on the left side.

To avoid myxœdema the smaller portion of the growth on the right side was left undisturbed.

Owing to the bleeding the antisepsis had necessarily been imperfect and therefore compresses were used instead of sutures. The post-sternal pocket healed by granulation, and recovery without complication resulted.

Although exophthalmos existed in this case prior to operation, the author does not report this as a case of Graves' disease, believing the symptom due to the mechanical effect of the humor on the veins of the neck. He calls attention, though, to the fact that diarrhœa and disturbed menstruation which were present were cured. He has seen cases of undoubted Graves' disease cured by operation, and thinks all cases of goitre which cause annoyance and are not relieved by medication, or which show areas of hardening, or which suddenly begin to increase in size after a period of inaction, should be extirpated.

Oher papers in this issue are "The Treatment of Congenital Clubfoot," by Dr. George S. Ney, and "The Doctor in Politics," by Dr. Frank S. Hough.

THE TEXAS SANITARIAN

for December. Dr. W. T. Baird writes of

Oxygen.

Oxygen he thinks one of the best heart tonics. The blood absorbs the gas, and the heart, being the first active muscle with which this comes in contact, is enabled to appropriate it first.

To benefit from this a muscle must be in action at the time the gas is present, and that active muscles derive increased energy from its absorption the writer points to the athlete in contrast to the student, to the wolf, cat and draught ox in contrast to the stalled ox and hog.

Wallian is quoted as claiming that no remedy has given such good results, even in organic heart disease, as oxygen, in his experience

In preparing the oxygen the author uses the mixture of chlorate of potash and dioxide of manganese, and in administering the gas dilutes it with from 20 to 50 per cent. of air. The directions given are to inhale the gas forcibly, not oftener than once in five minutes, and the periods of inhalation are distributed as uniformly as possible throughout the day.

A series of cases is given illustrating the effect of oxygen in various kinds of disease.

IN THE BRITISH JOURNAL OF DERMATOLOGY

for December Dr. H. Leloir concludes his article on

Dermato-Neuroses and Their Treatment.

The first point to be observed in treatment of these affections is to prevent contact with the air and to avoid local infection and mechanical irritation. In carrying out this treatment exclusive dressings are prepared by spreading ointments or pastes thickly on linen and covering the whole by gloves or wadding, or else use is made of gelatine, medicated varnishes, etc.

In the treatment of severe prurigo scarification, or else the making of numerous fine punctures with needles, is often successful where there is rapid formation of œdema or perifollicular congestion. Vasomotor constrictors, such as alcohol and alcoholic solutions of ergotin and ichthyol, are often useful, and so is counter-irritation by cautery, iodine, ethyl chloral spray, etc., along the spine or nerve tracts.

The continuous electric current has proved useful in a number of affections, particularly morphœa and vitiligo. Both the continuous and the interrupted currents may be used in treating trophic ulcers.

Electrolysis is an efficient but very painful method of treating rebellious cases of pruritus, particularly pruritus of the anus or vulva, but can only be applied to small areas. The induced current from a powerful static electrical machine has been used for the same purpose and has the advantage of not being painful.

In using the induced current in other neuroses of the skin the author has had very inconstant results, sometimes finding either the nervous or the cutaneous phenomena relieved and the other one made worse; sometimes no effect on one or on both; sometimes both have been relieved and sometimes both have been made worse.

Internal treatment varies with the symptoms. Hygiene is very important, and frequently the trouble seems due to the abuse of alcohol, tobacco, carbon monoxide, and very often it will be found to be a symptom of gout, uterine, hepatic or kidney disease, etc., so that it is necessary to make a thorough general examination before excluding other troubles as the probable cause.

The author is pleased at the general recognition of his statement made fourteen years ago, that "the skin ought, in most cases, to be considered the mirror of the nervous system."

IN THE BUFFALO MEDICAL AND SURGICAL JOURNAL

Dr. Frank J. Thornbury writes of the

Pathology of Trichinosis.

The disease occurs epidemically in herds of swine, the old animals being particularly liable to the disease, and the diaphragm, neck and loins being favorite sites for the parasites.

As many as eight trichinæ have been found in one capsule, but frequently they are separate.

In a few recently affected subjects the parasites were found, not yet encapsulated, in motion, and this motion was increased by the application of heat.

When too few trichinæ to cause death are swallowed they bore into the muscles of the most remote parts of the body, and as 14 per cent. of the bodies examined in the Buffalo dissecting-room proved infected, the author thinks that a great many of the cases

of obstinate chronic rheumatism are due to infection with this parasite.

HARPER'S MAGAZINE.

Senator Henry Cabot Lodge contributes to *Harper's Magazine* for January a vigorous article, entitled "Shakespeare's Americanisms," which contains reassuring and comforting doctrine for those who employ colloquial forms of speech. The following passage is one of many that will be read with interest: "Among characteristic American words none is more so than 'to guess' in the sense of 'to think.' . . . One sees it continually in English comic papers and in books also, put into the mouths of Americans as a discreditable but unmistakable badge of nationality. Shakespeare uses the word constantly, generally in the stricter and narrower sense, where it implies conjecture. Yet he also uses it in the broader American sense of thinking. For example, in 'Measure for Measure' (act iv, scene 4), Angelo says, 'And why meet him at the gates and redeliver our authorities there?' To which Escalus replies in a most emphatically American fashion, 'I guess not'"

HARPER'S WEEKLY.

Probably no other paper has more largely influenced public opinion in America, through the views that have been expressed and the reforms that have been advocated in its editorial columns, than has *Harper's Weekly* during the thirty-eight years of its existence, and its recent political articles and signed and unsigned editorials have been conspicuous for ability and for constructive as well as destructive criticism.

HARPER'S BAZAR.

Volume xxviii of *Harper's Bazar* will open brilliantly in January with the beginning of Maarten Maarten's striking and finely illustrated novel, "My Lady Nobody," a story which has Holland for its background and some charmingly real people for its *dramatis personæ*. Marion Harland will contribute a characteristic short story entitled "A Fin de Siecle Prodigal," and Harriet Prescott Spofford a piquant tale, with a whimsical New England heroine. Other features will be a paper on "House Building," from the woman's point of view, by Helen Evertson Smith, and the first of a series on "Colonial Dames," by Catherine T. R. Mathews. The fashions for January will embrace elegant toilettes for occasions of ceremony by Sandoz and Chapuis, from Worth models, and many beautiful outdoor costumes.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE

On the Treatment of Tapeworm.

Leslie Ogilvie, M.B., refers (*Lancet*) to the frequency with which the parasite is treated with success, as evidenced by the reappearance of the proglottides in the evacuations after the lapse of three or four months. He thinks it is not a question of the particular drug to be used, but the method of using it, and considers the directions as ordinarily given in text-books very defective. As an antecedent purgative he prefers sulphate of magnesium with jalap, which he repeats several times before he administers the vermifuge. The latter is given in two doses, of a dram each, at intervals of an hour. Two hours after the last dose he clears out the bowels again with a dose of castor oil and tincture of jalap. In this way he thinks he secures the most powerful effect on the worm with the least effect on the patient. He claims to have been successful in the complete removal of the parasite in thirteen consecutive cases. He considers it of importance to prepare the patient for a few days previously by dieting, and recommends the physician always to pay a visit to the patient shortly after the second dose of the vermifuge, and to inspect himself all the evacuations, which for convenience he directs to be passed into a weak solution of potassium permanganate.

The Etiology of Headache.

Dr. S. Vermel (*Revue Gen. de Clin. et de Ther.*), after a thorough study of the subject, says that he is inclined to attribute all headaches to an oversensitive condition of the sympathetic nerves controlling the peripheral vessels of the cranium and brain, or to an angioneurosis. It may be asked at once, he says, how the same symptoms, from the same cause, can be present in diametrically opposed conditions, such as plethora and anæmia, febrile and apyretic diseases, for example. The idea that the seat of pain is in the cortex has not been substantiated, for when a cortex is irritated there is locally only an hallucination of pain; the real pain is exhibited on some part of the body. Then if the attack of cephalalgia is not due to local irritation of the cortex, the seat of the trouble must be in the meninges. It is to dilatation of the vessels of the meninges, causing intracranial pressure, that the pain is due. The vascular dilatation extends to the minute blood-vessels in the region of the pituitary body, rupture of which gives rise to the epistaxis from which patients so frequently suffer during an attack of headache. It is

clear how this explanation answers for hyperæmic conditions, but how does it account for the same symptoms in anæmia? In anæmia there is a qualitative and not a quantitative change in the blood, the amount of fluid in the vessels remaining the same. In veritable anæmia from excessive depletion of the system, as from hemorrhage or cholera, the condition is different; but from the anæmia coincident with neurasthenia, hysteria chlorosis, etc., there is, so far as quantity is concerned, the same condition as hyperæmia.

In anæmia the vessels are very prone to dilatation, producing an exaggeration of the intracranial pressure, in consequence of over-excitability of the vasomotor centers allowing of local hyperæmias.

The author definitely states that the seat of pain in headache is always in the dura mater and not in the cortex; that the pain is provoked by the compression of the dura mater produced by increased intracranial pressure; and that this is true of all headaches, whether neuroses or of toxic or mechanical origin—such as diseases of the brain or of the meninges, constipation, etc., or of reflex origin.

PATHOLOGY.

Experiments on the Inoculability of Cancer.

Dr. Gratia, at the meeting of the Paris Academy of Medicine, said: In connection with Dr. Lienaux, *agrege* at the State Veterinary School, I have carried out a series of experiments in order to throw light, if possible, on the moot question of the inoculability of cancer. We have made use of both grafting and inoculation. We grafted fresh cancers on the skin, the peritoneum and the wall of the stomach; in all but one case we obtained immediate union. For inoculations we employed fresh cancer juice obtained by scraping or rubbing primary and secondary tumors. This juice, either pure or diluted with sterilized broth, was injected in doses varying from one-fourth to one-half cubic centimeter or more, choosing by preference for such inoculation those organs which are most frequently attacked by cancer. The results of our endeavors to transmit cancer from dog to dog or from man to dog were invariably negative, both with regard to grafting and inoculation.

The conclusions at which we have arrived from our personal researches are that under similar conditions cancer does not appear to be inoculable, even between individuals of the same species.

Taking into account all the facts actually known, we think the following deductions are justified:

1. The parasitic nature of cancer has not been satisfactorily proved.

2. The direct or indirect contagiousness of this neoplasm has not been proved, the most that can be admitted, in the present state of our knowledge on this subject, being the possibility of ingrafting, that is to say, transplanting cancer, and that principally on individuals exhibiting exceptional predisposition, such as cancerous patients themselves, for instance.

3. The etiology and pathogeny of cancer are still undetermined.

OBSTETRICS.

The Conduct of Ordinary Labor Through External Examinations Solely.

Drs. Leopold and Sporlin (*Med. News*) make a warm plea for limiting examinations made in the course of ordinary labor to the external parts, and adduce the advantages of such a course. Infection is thereby avoided, the natural sense of modesty of the parturient is not offended, and careless rupture of the membranes is avoided. Skill in external examination is acquired with reasonable readiness. In the large majority of cases such examination alone is sufficient for the recognition of the position and presentation of the fetus and for the study of the course of an ordinary labor. As there can be no objection to its frequent exercise, abnormalities of parturition may the more readily be detected early and means of correction be promptly employed. Experience soon teaches the difference in the position of the fetus assumed in case of pelvic contraction on the part of the mother. The position and presentation having been recognized by external examination, internal examination for the determination of possible pathologic conditions of the birth canal need be but brief, and can be conducted with great care. For the attainment of this desirable result it is essential that the obstetric pupil familiarize himself thoroughly with the conditions of normal labor as determined by physical external examinations, as well as with the physiology of normal labor. Obstetric operations are principally to be taught upon the phantom.

SKIN DISEASES.

The Treatment of Eczema.

Malcolm Morris, in a paper read before the Dermatological Section of the British Medical Association, treats on the management of eczema. With regard to internal medication, the less the better. In an ordinary chronic eczema, when the health does not appear to be affected, he relies entirely on local treatment. In acute inflammatory lesions antimony is of great value, beginning with ten to fifteen minims of the wine of antimony and repeating the dose in an hour, and if need be two hours later, then gradually reducing to six minims three times in twenty-four hours. With regard to local treatment, he treats every case as if it were of parasitic origin. The best remedy in dry chronic eczema, especially of seborrhœic origin, is sulphur, and next to that resorcin. He begins with ten grains of precipitated sulphur or of resorcin in an ounce

of zinc ointment, gradually increasing the amount of parasiticide. When the inflammation is acute ichthyol is especially useful. When there is much discharge he washes the part with a weak solution of boracic acid, and afterward dries it with muslin bags containing starch and boracic acid or flour mixed with boracic acid. Chrysarobin has been successful with very persistent chronic eczema of the flexures.—*Boston Med. and Surg. Jour.*

DISEASES OF THE EAR.

The Necessity of Protecting the Ear in Bathing.

Bathing without properly protecting the ears will not infrequently bring about an otitis media, and also other affections of the ear have been attributed to it, and as these affections can be prevented by very simple devices the attention of the public should be drawn to the matter. Dr. Laurence Turnbull, of Philadelphia, has drawn attention to the fact that if the water which has entered the ears in bathing is not removed (which can be done by leaning the head on one side and drawing the external ear forcibly outward, at the same time shaking the head and opening the mouth, also striking the ear with the palm of the hand) inflammation, followed by perforation of the membrana tympani, may occur in consequence of the decomposition of the water. Or the suppurative process may pass to the middle ear, cochlea and labyrinth, destroying the organ of hearing and even implicating the brain. A large number of diseases of the ear are attributed to sea-bathing, that is, bathing too frequently and remaining too long in the water. Exostosis of the meatus is particularly common in persons that indulge in the "header." The ears, especially if they are tender or diseased, should always be protected in bathing. Dr. Turnbull advises that ladies should wear an oilskin cap covering the ears and men should close the external meatus with a piece of cotton or other simple plug, which may be removed after leaving the water. This precaution is particularly advisable for surf-bathing and when floating on the back.—*Med. Review.*

NOSE AND THROAT.

The Asthmatic Nose.

The exaggerated ideas of the importance of nasal reflexes, as formerly held by many specialists, have led the more conservative general practitioner to doubt the existence of any relation between the nose and any pronounced disturbance of function in other parts of the body. The part played by the nose in the various forms of asthma has been so clearly demonstrated by some of our ablest authors that no reasonable excuse can now be given for neglecting a careful examination in these cases.

Many theories have been advanced as to how the disturbance is produced, and as to just what pathological condition in the nose is necessary to produce it.

Where there is sufficient hypertrophied tissue to produce pressure upon the septum, or, on the other hand, where the septum deviates sufficiently to impinge upon the turbinates, we are most likely to have some reflex disturbance which may manifest itself in an attack of asthma or an irritability of the larynx. That there are other causes for asthma it is impossible to deny, but that there always exists a certain well-defined relation between nasal diseases and what is commonly called hay fever is just as certain. From the experience we have had with these we are inclined to believe that the middle turbinate is the *sine qua non* in the production of this disease. In all cases we have seen there has been marked disturbance in the region of this body, with pressure caused either by hypertrophied tissue or enlargement of the bone. Just how this pressure causes a disturbance in the respiratory function, and why it should be perennial in its occurrence, are questions of much uncertainty. Pollen of the different autumn plants and dust are regarded as very doubtful factors in bringing on the attack by some of our most eminent observers. The peculiarity of a regular occurrence at almost exactly the same time each year suggests the probability of some mental influence. However this may be, a slight operation in the nose previous to the expected attack often delays or entirely prevents its occurrence.

Where polypi or other growths exist their removal often results in permanent benefit. The success which has attended careful nasal treatment in asthmatic cases seems at least to promise a better understanding and a more scientific management of such cases.

During an attack of hay fever, frequently repeated and prolonged douching with hot water gives most satisfactory relief. The œdema seems to disappear and then follows a most agreeable sense of comfort. Cocaine produces temporary relief, but the secondary effect is really to increase the œdema Weak solutions of atropine sprayed into the nose will often relieve local symptoms. Local treatment alone is not usually sufficient in these cases. Some attention must be given to the general condition of the patient. The syr. hydriodic acid has been highly recommended, and we have found it very satisfactory in these cases. Strychnia in one-thirtieth-grain doses is also a valuable adjunct to local treatment.—*Kansas Med. Jour.*

HYGIENE.

The Clothing of Infants and Children.

The following sensible directions are given for the dressing of the child at birth by Dr. T. W. Peers in the Kansas *Medical Journal:*

1. A square of absorbent cotton five to six inches square, with a hole in the middle, is adjusted smoothly round the umbilical cord and the latter turned up toward the chin and covered with a second piece of absorbent cotton without a hole.

2. A soft flannel band around the child's body which will reach from the nipples to the crest of the ilium, and pin it in front with small safety pins.

3. A diaper of soft cotton or cotton flannel; not unwashed, harsh new goods.

4. A soft flannel gown, made with sleeves, but no waist, and about one yard in length, open the full length in front and tied with tapes or buttoned.

5. A dress of silk, tennis flannel, figured woolen goods or unstarched linen, according to the weather, fancy or purse of the mother, made similar to the above gown or with a waist if preferred, a few inches longer and with larger sleeves.

When the cord has come off and the stump thoroughly healed the flannel band should be left off. At five to eight months, when the baby gets to kicking and short clothes are indicated, the following dress is suggested:

1. A flannel shirt reaching to or below the pubes.

2. Diapers.

3. Woolen stockings reaching well up above the knees.

4. Shoes with a wide, strong sole and plenty of toe room.

5. A well-fitting waist of cotton goods, to which is attached the garters and a flannel skirt. Ring garters should be avoided.

6. Later, when the child learns to attend to the calls of nature, the union garment, which includes shirt and drawers woven in one piece, is a very desirable article of clothing.

Bicycle Exercise for Women.

Dr. Laura Liebhardt states (*Woman's Med. Jour.*), regarding bicycle exercise for women, that "the majority ride with the saddle too low," and that this is responsible for cramping of the chest, straining the back and impeding full action of the muscles of the leg. There results a constant tension of the muscles above the knee, which gives a short, awkward stroke, as the reach is too short. The seat should be amply high for the entire leg to be extended and give to these muscles a second of relaxation on the downward stroke of the pedal. The knee must have perfect freedom, and in this respect a woman finds herself particularly handicapped, as she is unable to make the entire stroke with the action of the knee limited by a dress skirt. In Paris they do not stop with the unsightly bloomers, but have almost universally adopted the practical, yet far too radical, knickerbockers. This striking costume attracts but a passing notice, for the rationale of it all appeals to the French mind; but as the United States has fortunately not yet reached the Parisian standard, it is to be hoped that knickerbockers will confine themselves to spins in the mountains. Wheelwomen also subject themselves to needless jars by jumping instead of gliding from the wheel. They should be taught to mount and dismount from either side as men are wont to do. Corsets on the wheel, as elsewhere, should be denounced in the strongest terms, although nearly one-half of all wheelwomen tie up their muscles in this barbaric fashion. Many condemn cycling on the ground that the movements are identical with those called forth in running a sewing-machine. Machine-running simulates more the faulty way of wheeling, and the position is almost identical with that assumed when the handle bars and saddle are placed too low. In wheeling there are a greater variety of movements and less tension. Two-thirds of all women who ride wheels foolishly incur great risks by riding during certain periods, even to the extent of hill-climbing, when they should never mount a wheel, except for short distances, during the first two days. During the Nebraska discussion the general opinion was that the saddles in use were hardly proper. The long, wide saddle suspended between springs was considered very much superior to the rigid or hard models. A saddle much wider throughout was considered desirable, and cases were quoted to substantiate this claim.

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM DECEMBER 23, 1894, TO JANUARY 5, 1895.

The order assigning Captain James D. Glennan, Assistant Surgeon, to duty at Fort Snelling, Minnesota, is revoked. The order assigning First Lieutenant Henry A. Shaw, Assistant Surgeon, to duty at Fort Niobrara, Nebraska, upon the abandonment of Fort McKinney, Wyoming, is so amended as to direct him to report for temporary duty at Camp Merritt, Montana, and upon the completion thereof to proceed to Fort Snelling, Minnesota, for duty at that post.

Leave of absence for one month on surgeon's certificate of disability, with permission to leave the limits of the Department, is granted First Lieutenant James M. Kennedy, Assistant Surgeon.

Leave of absence for one month, to take effect about December 24, 1894, is granted Major Robert H. White, Surgeon.

The leave of absence on surgeon's certificate of disability granted Major Washington Matthews, Surgeon, is extended four months on surgeon's certificate of disability.

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ORIGINAL ARTICLES.

SKIN-GRAFTING—PSEUDARTHROSIS OF LEG—FAULTY UNION OF DOUBLE FRACTURE OF FEMUR.*

ROSWELL PARK, A.M., M.D., Buffalo, N. Y.

This is a case of skin-grafting which you saw a week ago and which I promised you should be brought into clinic to-day. Apparently every graft has united. You can estimate the saving of time which such an operation affords. I will irrigate the leg with a stream of very little force, so as not to wash off any bits of skin that have not completely united, and any pyoid material too tenacious to be removed by irrigation will not be disturbed. I want you to notice that the tip of the irrigator when not in use is kept in a glass bucket of sublimate solution. The wound is dusted with iodoform and covered with green silk protective. Half the secret of success in surgical work is the attention given to the dressings after the operation, and there is many a junior practitioner who can do an operation well, but who is at a loss what to do when the after treatment is considered. Therefore I like to do dressings before the class in order that they may become familiar with this less showy but important part of surgical technique. Two days is about as long as a dressing of this kind should remain in place, as the pyoid material will collect under the protective and it needs to be washed away, as it is prone to putrefy. Bichlorid gauze is applied over the protective to bar out germs of decomposition and the limb is bound to a splint to insure perfect rest. This I believe to be an important factor of success. The leg might have thrashed around in coming out of the anæsthetic so as to have displaced the grafts. At present the prospect is very good, but I have seen cases that showed the same amount of progress at this time that failed because the operator was satisfied with the result and became careless with the later dressings. The case must be watched with extreme care for at least a week longer.

*A clinical lecture at the Buffalo General Hospital.

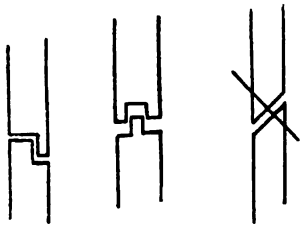
PSEUDARTHROSIS OF LEG.

This patient is a man of forty-five who has had a series of accidents involving the right leg. Thirteen years ago he broke it for the first time and it has been twice broken since. Part of the time he has had a good, useful leg and part of the time an ununited fracture has interfered with walking. At present there is a pseudarthrosis or flail-joint from a fibrous union of the bone. He is able to bear his weight on the leg, but it warps under him and gives him a very shambling, awkward gait. The deformity is gradually getting worse. There is now a concavity

amounting to a quarter of a circumference from ankle to knee. There is already shortening, and I have told the patient that although operation will probably relieve the instability of the limb, it will not obviate the shortening.

This is not merely a case of delayed union in which it suffices to stimulate ossification by rubbing the bone-ends together or by drilling. Here are bone-ends whose osseous tissue has been replaced by fibrous tissue, which acts as a tough leather thong to keep the bone-ends from wandering too widely from each other, and no result is to be looked for unless one opens up the region freely, cuts away the fibrous tissue, denudes the ends of the bones and brings the freshly cut or sawed surfaces together.

Just how the bone-ends may be best held together is a question to be decided during the operation. Sometimes we use mechanical devices. For instance, we may saw the ends obliquely and hold them to-



gether with a drill; or one may mortise or dove-tail the ends of the bone together. The principle is the same, although the details must be adapted to each particular case.

Before the application of the Esmarch bandage in order to make a practically bloodless operation, the leg is scrubbed, shaved and disinfected. Hands, dressings, instruments—everything that comes in contact with the wound must be completely sterilized. This leg was all scrubbed and cleaned yesterday, and an antiseptic poultice of green soap containing 5 per cent. of hydronaphthol has been kept on it ever since. Yet we shall apparently waste time by repeating the process to-day. So thorough is the scrubbing that it would be positively painful were the patient not anæsthetized.

Nearly half-way up the leg there is a large, roundish knob of bone. Eight or nine years ago an operation was performed for false-joint, which was successful, but the leg was again broken at a lower level. I will go a little to the inner side of the old wound. There is a little gelatinous fluid that oozes out of the false-joint cavity. This shows that we have really to deal with a newly formed joint.

It has been suggested to use a depilatory instead of a razor in preparing the field of operation. Calcium hydrosulphate has been generally used for this purpose. It is spread on for a few minutes and then washed off with water, taking the hair with it.

The relations of the parts here are so distorted that one hardly knows where to look for vessels and nerves. Now, if the bone were a piece of wood we could take it out, put it in a vise and saw it to any desired shape, but in its surroundings it is very difficult to form an idea of the exact outline required, and the task of the surgeon, so clearly indicated theoretically, is very difficult in practice. I contemplate making an oblique section of the bone with a chisel, since I cannot get in with a saw. Bichlorid gauze is crowded about the bone so as to prevent chips from getting into the wound.

It is very interesting from a morphological standpoint to note that so perfect has been the development of a joint in this case, that in addition to the fibrous covering of the bones, the semblance of ligaments and the synovial fluid, we even have an intra-articular fibro-cartilage. From the surgical standpoint, however, this interesting development delays the operation and makes it mechanically more difficult. The cutting of the bones is further delayed by the fact that they are almost as hard as iron. It is a strange and yet commonly observed fact that in the neighborhood of softening bone, or failure of bony development, we are quite apt to have excessively hard bone. The fibula is adherent to the tibia and must be separated so as to restore the normal contour of the limb.

I have now succeeded in removing the dense fibrous tissue and in freshening the bone ends. Now, while firm traction is made on the foot I will drill the bones with the aid of a dental engine. Through the drill holes silver wire is inserted, twisted together over the bone, and the twisted end laid flat so that it may become encapsulated without subsequent annoyance to the patient. The flesh-wound is

closed with catgut and dressed antiseptically, without drainage.

FAULTY UNION OF DOUBLE FRACTURE OF FEMUR.

This patient is a little child of three whose left femur was broken six weeks ago. From the appearance of the thigh it is evident that it was broken in two places, so as to leave a loose fragment in the middle. There is both angular deformity and over-riding of the fragments, and the limb is two inches shorter than its fellow. It would be a pity to let the child grow up with such a deformity. It is a question, however, whether we would better resort to osteoclasis or make a free incision down to the bone and chisel apart the faultily united fragments. The case is, in one sense, the opposite of the last one, yet the end of the operation is the same, namely, to secure the fragments of bone in their normal position. Theoretically I would much rather do the external operation, for it obviates the possibility of the entrance of septic germs through a wound. On the other hand, the ends of the bones are wrapped up in more or less callus, and I do not think that by breaking the bone in my hands or by bringing an instrument to bear upon the thigh I can free the fragments from the callus so as to get them into good apposition. I purpose, therefore, cutting down upon the bone under the most rigid asepsis, for there is no class of surgical work in which primary union depends so closely on the strictest exclusion of bacteria. Oliver Wendell Holmes describes a class of people who go around washing their hands in invisible water with imperceptible soap. I want you to notice that in my case the lather is tangible and real, and that I am working the green soap under the nails and into every crack of the skin.

The operation is a serious one for a child of this age. It is wholly different from breaking a rhachitic femur by the aid of a chisel passed through a small opening, as in Macewen's operation.

I can show you an example of over-riding of fragments of femur in a thigh bone taken from the old North Street burying-ground when it was being cut up into building lots. There must have been three inches shortening of the limb. Fortunately the doctor's name was buried with the specimen and it has not been resurrected.

The history of the present case, as I have just learned, is that the child fell on the floor and broke its thigh. I doubt whether that was the extent of the accident. If the bone would break in two places from such an injury we might diagnose osteomalacia, and certainly the bones should yield to manual pressure so that the serious operation, which I dread to perform on so young a child, might be obviated. The three parts of this femur form distinct, though very obtuse, angles. By external manipulation I have been able, somewhat to my surprise, to reduce the deformity very markedly. I will put on traction and leave the case for future operative interference if necessary. Although I have not restored the bone to an ideal straightness nor to the same length as the opposite one, I think it better to do this conservative operation on account of the large amount of callus, which would render the radical operation tedious, and also because the vitality of the bone is below par and necrosis might set in.

Let me call your attention to the best means of applying traction, and what I shall say will apply also to the treatment of recent fractures of the thigh in children. A little child will be restless and will inevitably soil its bed. Then the necessary disturbance to insure cleanliness and to prevent bed-sores will cause great pain if the leg is dressed horizontally, as it usually is in adults. But if the leg can be held vertical the weight of the child's body makes the counter-traction, and there is convenient access to the child's genitals and anus for purposes of cleanliness. If it is irksome for the child to have one leg held up in this way, both legs can be suspended.

Some time ago a boy was brought to the hospital who had been run over by a wagon and had sustained a simple fracture of one thigh and a compound fracture of the other. I operated upon him here, wired the femur which had suffered compound fracture and dressed the wound antiseptically. He was also bruised about the head and generally over the body; his vitality was impaired and recovery was necessarily slow. It was perfectly easy to care for the child with his legs trained up in the per-

pendicular direction. It would have been very difficult to have done so with the legs extended on the bed.

I apply a gauze bandage over the foot and ankle in order to keep the pressure of the adhesive plaster from the malleoli. The adhesive strip is then applied to the sides of the leg up as far as the lowest fracture and held firmly by the gauze bandage over it. You will probably want to know how much weight is to be fastened to the cord. This I cannot tell you offhand. It will be enough to keep the limb straight and not enough to exert any strain on the tender tissues of the child. Again, you will ask, Would it not be better to apply a splint to the femur to hold it straight? While splinting might be of advantage under some circumstances, it would make it impossible to examine the femur from time to time, and the main element of success in our treatment, as in success in other matters, is the *pull* which we can exert.

IMPORTANT QUESTIONS IN RAILWAY SURGERY.*

M. CAVANA, M.D., Oneida, N. Y.

Organization in railway surgery, as in other specialties, becomes valuable to its membership proportionately to the amount of its educational worth as the result alone of such organization. The average active railway surgeon, however busy his professional life, is generally willing to sustain the loss of time, the sacrifice of business and the monetary outlay necessary to enable him to attend the conventions of his surgical associations. But, not unlike other business men, he expects some return for his outlay, some compensation for his loss of time, something more than a short period of rest and recreation and the sight-seeing of an extended railway trip. He expects to gain that which to the truly loyal professional man is more than money, and which can only be purchased by a personal presence at such conventions, namely, such increase in his store of practical knowledge as will enable him to return the better qualified to his field of labor.

To render our conventions thus profitable to our membership and to insure a progressive and prosperous existence, we are of the opinion that, for the present at least, more attention must be devoted to those important and practical every-day questions of our specialty which as yet remain unsettled.

First and most frequently encountered is the question of the extent of the surgeon's liability and obligation to his employer (the railway corporation which he serves) in his connection with cases which are likely to result in claims for damages for injuries received or to become subjects for litigation when such demands are questioned or ignored.

It will be conceded the fact that the shrewd surgeon, possessing not only the confidence of his patient but also that of the friends, becomes a power in the sick-room and a very responsible factor in such a situation. Any suggestion from him will always be entertained, and his advice either to sue or to settle quite generally followed. Therefore, when requested by our claim agents, shall we as surgeons in charge of the injured encourage our patients to accept terms of settlement which of our own knowledge we know to be fair and liberal toward the patient and satisfactory and equitable to our corporations? Or shall we adhere strictly to our professional duties, ignore the interests of our employers in such cases, and permit, without even a protest on our part, the only possible conclusion of their drifting into the hands of unscrupulous attorneys?

Claims for damages resulting from railway injuries, like snow-drifts in the deep railway cuts, grow rapid with age and generally assume immense proportions in remarkably short spaces of time; particularly so following the exchange of the company's surgeons for the local pettifoggers who, the "streptococci" of railway enterprises, infest every locality and in-

* President's address, Fourth Annual Convention of the New York State Association of Railway Surgeons.

fect every approachable case of railway surgery, and who universally succeed either in forcing settlements at unjustly exorbitant figures (they pocketing the lion's portion of the amounts obtained) or in compelling on the part of the railway companies the defense of expensive suits at law.

In the future considerations of this question, the Chair recommends inviting the participation of some of our prominent railway managers or claim adjusters in addition to our own membership, in order that the conclusion obtained may be as nearly as possible the proper general guide in such situations.

The second important unsettled question is that of the cash value of human life, or the amount of liability in cases where death results from railway accident. This question is now governed by statute and the death liability fixed at $5,000. But the constitutional amendment (Article No. 18) adopted at our recent election repeals this law, thereby relegating this important question again to the unsettled column. Without questioning the wisdom of the adoption of this amendment or criticising the judgment of those who were instrumental in submitting the fate of the question to the unintelligent masses, we cannot deny that while the stages of life—infancy, childhood, youth, manhood and old age—vary materially in value, the repeal of this statute cannot but result disastrously to the railway corporations of the State, and that their interests demand our earliest possible consideration and solution of this question, and the establishing of a basis for intelligent and equitable calculation as to the cash value of life in its various stages of human existence.

Question third: Should railway surgeons procure from patients the histories of accidents and frame therefrom records of the material points bearing upon the causes and conditions surrounding such cases, and when possible over the signatures of the injured parties in the presence of witnesses? If so, would not much of the prevailing litigation be prevented, settlements of just claims be more easily effected, and unjust or fraudulent demands less often be prosecuted? For the solution of this question the Chair begs to suggest reference thereof to our able "alli" and coworker, the New York Medico-Legal Society, with a request for its consideration and for a recommendation to be presented at our next convention.

Question fourth: May not railway surgery become a potent factor in the suppression and detection of fraud? The principal suggestion prompted by this question is the great need of more liberal legislation bearing upon the rights of defendants in suits for damages. Parties seeking to recover for personal injury should be compelled by law to yield to the defendant, when properly requested, the privilege of a surgical examination of such alleged injury; and refusal on the part of the plaintiff to permit such examination should be evidence prejudicial to the security of the claim. Of course such privilege should be guarded by reasonable restrictions and necessary formalities, to insure good faith in the application therefor as well as in its acceptance. Verdicts of juries finding for the plaintiff (the usual termination of suits to recover for railway injuries) generally include liberal compensation for the probable continuation of the alleged disabilities for periods of time covering months, years, or even the remainder of the natural life, and the expensive features in the computation of such verdicts invariably are those of mental and bodily suffering, the loss of valuable time and the requirement of regular care, aid and attendance during the periods of total disability.

In consideration of the fact that a very large majority of the alleged sufferers from railway injuries, being quite securely protected by the existing faulty and incomplete statutes, very generally succeed in deceiving the courts and juries by assuming to suffer total disability during the trial of the causes, and by volumes of exaggerated testimony from unprincipled witnesses also frequently succeed in convincing such juries of the permanency of the apparent disability as well, what, then, is more argumentative of the necessity for better legislation than the proof of the occurrence of complete convalescence in a large number of cases, dating from the very moment of the settlement of their claims, and that no redress is by law afforded the unfortunate defendant who has paid a verdict covering the expense of a suffering life term requiring regular aid and attendance?

Additional legislation empowering defendants to compel surgical investigation in cases of premature convalescence, and to bring suit for the recovery of such portions of verdicts as may be discovered to have been obtained by deception and misrepresentation, and providing for the indictment of all the parties conspiring to sustain the frauds, would result in materially cheapening most of the claims for damages and in greatly lessening the number of railway cases upon the calendars of our courts. In such an event the unprincipled classes who now expend twice the necessary energy required to sustain life by honest industry in their diligent search for defects in the sidewalks and bridges of their localities and for railway complication upon which to base suits for damages, finding our laws punishing rather than inviting dishonesty and exposing rather than protecting fraud, would be driven from the field and their occupation practically ended; and the struggling corporations, supported by their surgeons, would then occupy positions equal and just with their plaintiffs in our courts of justice. Grant to our railway corporations the legal rights of enforcing subsequent surgical examinations and of reclaiming on verdicts proven unjust, then, in the judgment of the Chair, we will have discovered the most effectual eradicator and the most energetic prophylactic in the treatment of that notoriously obstinate and prevalent disability, the railway spine.

Shall we amputate or shall we wait? For a period of nearly two hundred years the subject of amputation has occupied the minds of the surgeons of the world, and from the beginning of the age of steam railways to the present time no one subject has grown more rapidly in importance nor is at the present day more frequently encountered by the railway surgeon. Associated with this is the astonishing fact that as yet no generally accepted criterion has been established as to what may be the safest and most favorable time for amputation. Abundant evidence and eminent authority may be cited in support of either immediate or delayed interference in cases of crush injuries, and in consequence the conservative surgeon discovers little satisfaction in consulting his text-books or authorities upon the question.

The legal complications so liable to result from the present unsettled conditions of our practice and literature upon this subject, are such as threaten to involve the operator in a large percentage of his cases, and suits for malpractice and for the recovery for damages have so frequently followed amputations that to-day few of our leading surgeons dare even to hold recorded titles to real property. In support of these arguments permit us to submit an example illustrating present possibilities.

A New York State surgeon accepts the care of a case suffering from a crush injury of an extremity. He is untiring in his professional attentions to the patient, exercises therein his best possible judgment supported by a liberal consultation and careful following of some of the acknowledged authorities. The patient encounters certain of the unfortunate liabilities and eventually succumbs.

In the malpractice suit which follows an expert surgical witness testifies that in his judgment and belief the amputation should have been deferred to a much later period or until the line of demarcation had appeared.

The next witness testifies that the amputation should have been immediate, or as early as the establishment of reaction following the injury. He also submits rational argument and abundant statistics in support of his assertion.

The third witness expresses the opinion that it would have been much safer practice to have accepted an intermediate period for the amputation. He argues that such interference should be delayed until the patient has been afforded ample time for complete reaction and preparation for the ordeal.

Expert witness No. 4 expresses as his opinion, founded upon a careful review of all material facts in the case and upon his own wide experience with traumatisms, that amputation at any period was inadvisable and uncalled for in the case. He substantiates his assertion by illustrative proofs of recoveries of cases wherein much more extensive destruction of tissue ensued, and which recoveries resulted in a very satisfactory degree of usefulness of the injured parts.

In framing of verdicts in modern medical cases by the illiterate elements composing the usual petit juries, can we wonder that in their attempt to weigh the

medical and surgical evidence the poor creatures in despair are forced to the silent query, "Where are we at?"

The signs of the times point to the State organizations as the coming educators of railway surgery. They are much more wieldy, their conventions more accessible and their membership much less changeable than are those of larger bodies. Therefore we feel privileged to urge upon this association the arming for the fray and equipping for that untiring action that will result in such continuous agitations of our present important unsettled questions as will enable us to establish authoritative precedents for the general guidance of the surgeon in his conduct upon the witness-stand as well as in the care of the patient.

The interests of our corporations, the welfare of our patients and our own individual safety demand early conclusions in these questions, especially of amputations. For this reason the programme arranged for the day's deliberations bears evidence of the initiatory step toward the coveted results.

The jurisdiction of our organization includes territory richer in resources and more prolific in means for demonstration and experiment than any other State or commonwealth of the continent. The names appearing upon our membership rolls and those upon the day's programme are sufficient guarantees to the most incredulous of New York State's ability to cope with the task which we urge upon her.

Then may we hope that our future conventions will continue to make satisfactory progress toward the ultimate solutions of the now important unsettled questions in railway surgery.

THE CLINICAL THERMOMETER.

J. W. CARHART, M.D., La Grange, Texas.

The intelligent practice of medicine at the present time implies a reasonable proficiency in the subject both as a science and as an art.

Every qualified physician should congratulate himself that medicine has, to a great extent, rid itself of the mythical—has dropped the shadowy veil that for centuries obscured its beauty; and that now, as never before, its power and grandeur are the admiration of the world.

The speculative has become subordinate to the demonstrated, so that what cannot be proven is not to be received and incorporated into our medical creed as an article of faith and practice. We undertake to carry out the injunction, "Prove all things; hold fast to that which is good." The widespread spirit of deep and thorough investigation and original research which is fully satisfied with nothing short of demonstration has laid under contribution every instrument of precision that can be advantageously employed in the work of the learned practitioner in the alleviation of human suffering. This spirit of investigation and research is not satisfied with instruments provided ready to hand, but has taxed to the utmost the masterful inventive genius of the age, and has originated vast numbers of appliances of incalculable value, which the astonished intelligence of this brilliant period stamps as curious, useful and now indispensable.

The microscope has furnished us a revelation of the minute atoms of the field of histology. Physiological chemistry handed us the test-tube, while physics gave us the spectroscope. Not content with these we asked for the sphygmograph and the spirometer; and that our armamentarium might be more complete, we asked of science and of art a thermometer that would register the tenth of a degree of thermal change in the human system, and the contribution was at once made.

So thoroughly accurate has enterprise made these instruments by years of seasoning and the application of the severest tests that my Taylor Brothers' thermometer has never failed to register the slightest variation, even to the tenth of a degree.

So far from having exhausted resources, we are convinced that the work in the demonstrative department of our profession is but begun and that we are on the

borders of a vast field which we shall enter and widely explore.

While we contemplate with just pride the solid advances by our profession in the work of demonstration and in the production and use of instruments of precision, we feel constrained on this occasion to sound a note or two of warning lest, in our use of such instruments as the clinical thermometer and the sphygmograph, we come to depend upon them instead of using them as accessories, and thus lose the *tactus eruditus* of which the fathers of medicine made such ample use and without which, I undertake to say, no man or woman can practice medicine with either safety or success.

I have chosen this subject in order that I might call your attention to what I regard as a startling defect developing in many of the younger members of the medical profession, and which promises to increase and to become more pronounced, growing out of the abuse of the clinical thermometer. I refer to the present lack of that habit and consequent deficiency of skill which was possessed by the better class of practitioners in the examination of the pulse and the determination of temperature, or rather of thermal changes, by the educated touch before the introduction of the clinical thermometer. The modern sewing-machine, with its marvelous capacities, is a monument of our civilization; but it can never wholly usurp the place of the delicate needle in the deft fingers of an intelligent woman. Our appreciation of lithographs, however beautiful they may be, can never equal the admiration we feel when viewing the sublime paintings which are the monumental products of the immortal masters. Thus, though the clinical thermometer is of incalculable value, it neither can nor should it ever take the place of the trained fingertips. Wherever it does supplant the latter, the patient suffers and our profession receives a stab.

The sphygmograph cannot interpret or transfer all the qualities of the pulse, any more than it can convey a distinct idea of the heart-sounds. That requires the practical ear. Nor can the clinical thermometer do more than register the thermal condition of the patient. The temperature chart, with all its graceful curves and geometric lines and angles, may please the vanity of the devotee of instruments of precision, while, undetected by the skilled touch, the depressed heart may suddenly "cease at once to work and live."

This danger is increased by the antipyretics so extensively in use during the last few years. The doctor, stimulated by the wish of patient and friends, pushes the antipyretics, noting with satisfaction the temperature chart, without in too many instances ever touching the wrist to study the pulse, until, to the amazement of the doctor and the consternation and grief of friends, the patient is dead. "Heart failure" has come to be the hackneyed and unmeaning registration as the cause of death—unmeaning, except as it betrays the ill-advised dependence upon that little instrument of precision, the clinical thermometer.

The shocking mortality in typhoid fever may be justly chargeable, to a great extent, to the clinical thermometer. For several years I have not used a clinical thermometer in typhoid-fever cases. I administer antipyretics with the most sparing hand, endeavoring to conserve the heart's integrity which is so liable to be impaired in this disease. There is no difficulty in determining without a thermometer the thermal changes, at least with sufficient accuracy, extraordinaries excepted, for practical purposes in typhoid fever, and for that matter in almost any other fever.

If we allow one degree of temperature over 98.5° for every ten beats of the radial pulse over 75 to the minute, we can determine the temperature even to the fraction of a degree. With the trained fingers upon the pulse and the trained ear over the heart, we cannot well be misled either as to temperature or as to the condition of the suffering heart.

Some practitioners of medicine are liberally endowed with the faculty of observation which they have diligently cultivated and largely developed, while others are seemingly lacking in this most essential qualification of a good physician. No instruments of precision can compensate fully for the lack of this admirable power. The less we depend upon the clinical thermometer and the more we come to regard it as merely auxiliary to the educated touch and to careful, thorough scientific observation, the better it will be for all concerned.

In the matter of observation there must

be taken into account all the considerations, surroundings and circumstances of the patient. This the sphygmograph and thermometer cannot do. For example: "The frequency of the pulse is increased by the activity of the working organs, by muscular labor, by digestion (increased glandular labor), by psychical processes (emotions, pain, intellectual labor), exposure to heat and elevation of the body temperature. Position, in accordance with the muscular labor involved, affects the pulse-rate, which is higher standing than sitting, higher sitting than lying. Guy found the averages in adult males standing, 79; sitting, 70; lying, 67; with remote extremes and the differences increasing with the frequency of the pulse. The differences are less marked in females and in early youth. Graves states that in hypertrophy of the heart these differences disappear, and the same has been said of pregnancy."*

There are likewise conditions affecting temperature which are not taken into account if the object be simply to reduce the temperature as shown in the reading of the thermometer. What might be regarded as high temperature under one set of circumstances would not be regarded as such under different circumstances.

We insist, therefore, that while the clinical thermometer is a useful instrument in the hands of the observing physician, it may be an instrument of death with the unobserving who simply seek by antipyretics to reduce fever.

GOLD AS A THERAPEUTIC AGENT.

W. H. WALLING, M.D., PHILADELPHIA.

Gold has long been used as a remedial agent, but to a very limited extent. This was due probably to the fact that but one preparation, the chloride, was available.

Within a few years, comparatively, the bromide of gold has been added to the list of preparations. Still more recently the tribromide has been presented by an experienced chemist, clinical results proving its great superiority over the other preparations. Gobert states that the bromide of gold and sodium is far more prompt in action and much more certain than are the other bromides, the doses at the same time being far less in amount. He considers $\frac{1}{10}$ gr. of the bromide of gold equivalent to ten to thirty grains of the bromide of potassium or sodium in the effect upon epilepsy.

Fèrrè, of Paris, studied the relative toxicity upon animals of the bromides, and tabulated them in the following order: Bromide of mercury, bromide of cadmium, bromide of gold, bromide of barium, bromide of copper, bromide of manganese, bromide of zinc, bromide of arsenic, bromide of potassium, bromide of nickel, protobromide of iron, bromide of magnesium, bromide of ammonium, bromide of calcium, bromide of strontium, bromide of lithium and bromide of sodium.

The solutions used were of the strength of 1 per cent., and of this ten c.cm. (two and one-half drams) were injected intravenously every minute.

Shteherbak found that gold bromide was six times as strong as the bromide of potassium in its action upon the psychomotor centers, although it contains only 55 per cent. of bromine to 77.7 per cent. of bromine in the potassium salt, and 67.2 per cent. in the bromide of sodium.

Later writers have had most gratifying results from the use of the bromide of gold in a variety of diseases, notably in the scleroses. Combined, however, with arsenic, it seems to exert its most pronounced effects.

The preparation which I have used with great benefit in locomotor ataxia and kindred affections is a solution of the tribomide of gold and the oxybromide of arsenic.

This solution is of a beautiful magenta color, perfectly transparent and is permanent. The coloration is due entirely to

* "Wood's Reference Hand-Book of the Medical Sciences," vol. vi, p. 85.

the tribromide of gold, the other bromides being colorless. Each ten drops from the dropping-bottle contains one-thirty-second of a grain of the tribromide of gold and one-thirty-second of a grain of the oxybromide of arsenic.

The utmost care must be exercised in the preparation of these delicate chemicals, glass and porcelain utensils only being used. They should not be allowed to come in contact with a metal at any time, either during the manufacture or in the dispensing.

Another combination that is very effective is the solution of the tribromide of gold and the oxybromides of arsenic and mercury containing the same quantity of each salt as the first solution named. The color is also the same.

This latter solution is a specific for all conditions arising from syphilis. It will produce salivation, but not in so marked a degree as other mercurials.

These solutions present the tri and the oxy bromides in the best possible form for administration; they are easily borne by the stomach, are prompt in effect and lasting. Goubert found that the bromide of gold completely controlled epilepsy; some cases going several years without a return of the complaint. Still better effects may be expected from the tribromide of gold and the oxybromide of arsenic. In several cases in which I have used this solution it has proved by far the most satisfactory of any medicinal remedy administered. It controls the fibrillary twitchings so prominent in some spinal affections, restores the tone of the nervous system, relieves melancholy and restores the failing energies of tired brain-workers. It also has a most marked effect upon rheumatism. One prominent physician writes me that since taking this remedy he has not suffered from rheumatism in the least, a relief that he has not experienced before in years. This preparation is also very effective in sciatica and other neuralgias.

The solution of the tribromide of gold and the oxybromide of arsenic in doses of seven to ten drops three times a day is very beneficial in sexual debility. One patient requested me to discontinue its use, as his "powers" became somewhat troublesome. The decided result in this case I attributed to the effect of the powerful alterative and tonic action of the chemicals upon the nervous centers, the lowered tone of which was the cause of impotence.

I have not used these preparations in inebriety, but from reports of the prompt effects from the administration of the bromide of gold in that neurosis, I am fully satisfied that still better effects would follow the use of the tribromide. In fact, this is a most valuable addition to our armamentarium for the treatment of all nervous diseases.

It is of the utmost importance that the tribromide should be carefully and properly prepared and dispensed only in solution.

Disappointment will result if these precautions are disregarded.

The Danger of Anæsthetizing Diabetics.

Baxer calls attention to the danger of narcotizing diabetics. He has reported three of his own cases and nine collected from medical literature. Even in slight cases of diabetes the patients became comatose and died. Coma did not develop until the chloroform narcosis had passed off, in twenty-four to forty-eight hours. The patients then became indifferent, stupid and confused, finally lost consciousness, urine and feces were passed involuntarily, and they perished in coma. This communication is important, since it shows that the administration of chloroform is dangerous even when there is a slight degree of diabetes, it being impossible to predict whether or not coma will develop.—*Deut. Med. Woch.*

Lactate of Strontium in Bright's Disease.

According to Dr. Ried (*Lancet*) the lactate of strontium, which is certainly an excellent diuretic, is beneficial in a large proportion of cases of Bright's disease, at all events when no sclerosis of the kidney has commenced. It should not be given in powder, as it is liable to provoke sickness; but when dissolved in the proportion of one to six parts of water, three or four tablespoonfuls can be taken per diem without unpleasant effects. Its diuretic action has induced Dr. Ried to believe that the lactate of strontium may be advantageously used instead of salicylates in the treatment of pleuritic effusions.

COMMUNICATIONS.

PRIORITY IN THE USE OF LATERAL TRACTION FOR THE RELIEF OF INTRA-ARTICULAR PRESSURE.*

A. M. PHELPS, M.D.,† NEW YORK CITY.

The question of priority always dates from the time of publication; only for this it would be possible for valuable discoveries to be appropriated by others. The question of an individual's statement in regard to a matter without the proof of publication is absolutely invalid for the purpose of establishing priority. This is only fair to investigators, and it is fortunate that the scientific world recognizes this fact, otherwise great injustice might be done.

As regards the question of the application of lateral traction in hip-joint disease for the relief of intra-articular pressure and fixation, and the manner of its application, I believe I was the first to publish it.

In February, 1889, I read a paper before the New York State Medical Society on "The Management of Hip-Joint Disease from an Anatomico Pathological Basis," which paper was published in the "Transactions" of the society for that year. It was also published in the New York *Medical Record*, May 4, 1889.

In that paper I published drawings of my lateral-traction fixation splints, and also a plaster-of-paris portable bed with lateral traction applied. I also explained the rule which should govern the application of extension or traction in hip-joint disease.

From that paper I quote, page 313, "Transactions," 1889:

"I fully agree with Sayre, Taylor, Barwell, Marsh and others that spasm of the muscles should be overcome by extension.

"I also fully agree with Thomas, of Liverpool, that every joint should be fixed and absolutely immobilized until all inflammatory action has subsided and a cure effected; but I do not believe that immobilization of the joint can be accomplished without extension, neither do I agree with the first-named gentleman, that extension immobilizes a joint sufficiently to get the best possible result, but that the combination of the principles of fixation and extension should be the law. Hence the long-traction splint, which admits of motion, does not immobilize, and the patient produces injury of the joint every time he steps upon it, as is evidenced in the vast majority of cases by the almost constant increase of the deformity after the splint is adjusted. Neither does a Thomas splint produce extension; hence there must be abnormal intra-articular pressure when spasm or contraction of muscles is present, which must produce congestion of the head of the bone. And then, if extension is to be applied, it should be in the line opposite to the line of traction made by the muscles; in other words, to apply extension to the hip joint, we should not only make traction in the line of deformity, but also in a line at right angles to that deformity. To relieve perfectly intra-articular pressure, extension must be made in a line corresponding to the axis of the neck, and not with the axis of the shaft of the bone, for the following reasons:

"The adductors and abductors pass from the femur diagonally across the body to the pelvis, as Figs. 1 and 2 'Transactions' will demonstrate. These, with other muscles, are the ones affected by spasm. When they contract, the head of the bone is grown firmly into the acetabulum, the force operating on a line corresponding to the axis of the neck. The flexors act on a line corresponding with the axis of the shaft."

Then follows a description of the plaster-of-paris portable bed with illustrations.

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*Read before the American Orthopædic Association, May 30, 1894, Washington, D. C.

†President American Orthopædic Association, 1894.

"The manner of applying lateral traction while the patient is in bed, to overcome deformity, and also of the splints which I devised for the purpose of carrying out this idea, see pages 316–320 of the 'Transactions' of the same year."

So far as I have examined the literature upon this subject, this is the first paper printed that describes the application of the principle of lateral traction for the relief of intra-articular pressure and fixation in hip-joint disease. At the time I read this paper I was not aware that any one else had ever printed anything upon the subject, and I find, upon looking over medical literature, that no one else has published the fact of the application of lateral traction for the purposes indicated before my paper of 1889. I have had made a brief translation of what has ever been said upon this subject by the German surgeons.

"Med. Jahrbücher," 1873, Professor Albert, "Die Extension bei Coxitis:" "I was asked by Dumreicher to treat a large number of patients suffering from hip disease, and to treat them without extension, and afterward to compare the methods with those treated by extension. I do not like to establish a rule when I say that without extension we can get along at least as well, and perhaps better, than with the extension. If extension really removed the pressure of the corresponding inflamed bones, then it might accomplish something. It is doubtful if the inflammatory process is retarded or improved through extension. And then again I must say that every method of extension that constantly changes the position of the intra-articular surfaces is wrong. This is sure, that through the new method intra-articular pressure is not relieved, but, on the contrary, more intra-articular pressure is induced.

"Busch proves conclusively that extension does not relieve intra articular pressure, and rightly thinks that if extension is to be applied it should be in the axis of the trochanter and not in the shaft of the bone.

"He further thinks that the pressure is also a remedy, as it stops the growth of the inflamed vegetations."

He further says: "Professor Dumreicher has frequently said in his lectures that to relieve intra-articular pressure traction must be in two directions." But this was never applied nor published. He further says:

"I have seen cases where extension acted splendidly, when it was better than any other method, and if we were able to diagnose the pathological condition in the hip as we do in the knee I would not hesitate to apply it.

"Severe pain might be due to pressure between the articular surfaces, and if extension were to be used to relieve pressure it could only do so by being made in the axis of the trochanter."

Further reference: Busch, 1863, "Langenbeck's Archives," vol. iv, beginning page 50. Also vol. xiv, Czerny, *Wiener med. Wochenschrift*, 1869, No. 33 ff. Hüber, translated by Dr. Schepero.

So we see from this translation that lateral traction was not applied by either Albert, Busch, Dumreicher, or any other German. But they wrote in the strongest manner against any form of traction, and showed conclusively that if traction were to be applied it should be made in a line corresponding with the axis of the neck, and not with the shaft of the bone; but they make no mention of having applied it.

Wallace Blanchard, of Chicago, published an article in June, 1889, upon his apparatus for treating hip-joint disease, in which he attempts to make lateral traction. In his article he says: "It is beyond question that a really efficient apparatus for hip joint disease must meet three requirements:

"1. It must afford traction outward as well as downward, so that the mean force exerted shall be in an axis with the neck of the femur, and thus relieve from pressure all the articular surfaces of the joints.

"2. It must afford immobility.

"3. And allow of unlimited out-of-door exercise, as far as pain or danger to the diseased joint is concerned."

But this was published after my article read before the State Society in February, 1889. In this article are diagrams which are similar to ones which I have used in teaching for more than ten years.

Sayre, in "Sajous," 1890, vol. iii, gives Blanchard priority, and then he says: "We have done this for years with great satisfaction."

And then again in his article published in the New York *Medical Journal*, April 30, 1892, on "Results in Cases of Hip-Joint Disease Treated by the Portable

Traction Splint," he attempts to claim priority by publishing cases from his case-book.

It is needless for me to say that any statement made in the article of Sajous, or even in the article referred to, April 30, 1892, would be absolutely worthless to establish priority. And further, in this article of April 30, 1892, I find the following statement:

"There has been considerable discussion as to priority in the application of lateral traction in hip-joint disease. I may say that in looking over my notes I find I applied it to L. A. McC. in 1868, in the presence of Dr. L. M. Yale."

If this statement was true, even though it had never been published, I would be willing to give to Dr. Sayre due credit for priority. This case-book to which he alludes was presented at the Academy of Medicine to prove priority, and I have made a copy of the notes of the case. Now I find that Dr. Sayre did not in 1868 (according to his note book above mentioned) apply lateral traction to L. A. McC in 1868. The date is March 27, 1872. that he claims to have done it.

And then lateral traction for the purpose of relieving intra-articular pressure was not applied to L. A. McC. at any time, as this same note-book will prove: "A second weight was attached to the thigh by means of *adhesive plasters* in such manner as to cause *external rotation* of the limb." This was a case of hip-joint disease in the third stage, with extreme inward rotation, and the weights and pulleys were adjusted for the purpose of overcoming inward rotation and not for the purpose of relieving intra-articular pressure, as he claims. Then I think that the claim of Dr. Sayre to lateral traction is entirely invalid and will not bear examination.

In his discussion of a paper which I read upon this subject before the Academy of Medicine, April 25, 1892, Dr. Sayre fully agreed that lateral traction and fixation was the law of treatment; that it was important that lateral traction should be applied, and claimed that he had always applied it.

I find in looking over the last edition of his book no mention of lateral traction. I find in his article of April 30, 1892, already quoted from, no mention of the application of lateral traction in any of his cases excepting Case III, 1869, and Case IV, 1864, and the case which I have already quoted, in all 407. There is no mention of it since 1872, in the L. A. McC. case, when it was not applied.

Inasmuch as Blanchard and Sayre have mentioned their use of lateral traction prior to the date of their publication, it would only be fair for me to make a statement.

From 1872 to the present time I have used lateral traction for the relief of intra-articular pressure in hip-joint disease. I have taught and applied the principle since 1874, as the note-books of my students in the colleges where I have had the honor of teaching will demonstrate. I have applied lateral traction to the splint which I have during all this period; but as I said at the commencement of this article, these are simply statements and count for nothing in the establishment of priority. Published statements are the data from which we are compelled to work.

I might further add that in the year 1884, by invitation of Dr. Schede in the Hamburg General Hospital, I put up many cases of hip-joint disease with lateral traction, as the records of that hospital will show.

I have written this article in a spirit of fairness, and I have devoted much time in looking up the subject, and my object is to place a landmark that can be referred to that will be perfectly authentic for students in the future who are desirous of exact data from which to work.

The following conclusions must be arrived at:

1. That in February, 1889, the first paper on the subject, demonstrating the application of lateral traction for the treatment of disease of the hip-joint by relieving intra-articular pressure and fixing the joint, was read by myself.

2. Following this, the paper of Blanchard, of Chicago, in the same year, in which he gives me credit for priority of publication.

3. That the case quoted by Dr. Sayre to establish a priority for himself was not treated by lateral traction applied for the relief of intra-articular pressure of the joint.

4. That the Germans who have written upon the subject only mentioned lateral traction as an argument against the Amer-

ican idea of traction as applied in the long-traction splint or by the weight and pulley, and that they publish no record of having applied it themselves, because they did not believe in any form of traction.

MEDICAL STUDY IN EUROPE FOR THE PRACTICING PHYSICIAN.*

F. R. REYNOLDS, M.D., EAU CLAIRE, WIS.

Since my return from Europe I have repeatedly been asked whether there really are any advantages to be gained by crossing the ocean for the study of medicine. I have invariably made answer in the affirmative; and I will here endeavor to give my reasons for the belief that in me lies.

Although much of benefit can be obtained in Europe by the recently graduated physician or the student of medicine, in my opinion the advantages are to the practicing physician. He who through years of labor in practice has ascertained his weak points and is fully acquainted with his shortcomings, who has arrived at the point where he is thoroughly in earnest in his search for the truth and who will be generous in his reward for services rendered and favors bestowed—to such a one, I say, the advantages are vast. Therefore to the practicing physician are the following remarks directed.

Through the kindness of Drs. H. Knapp, of New York, and E. L. Holmes, of Chicago, I carried with me letters of introduction to the most eminent ophthalmologists and otologists of London and Vienna, by reason of which my opportunities for observation and research were greatly facilitated.

My first investigations were made in London, principally in the Royal London Ophthalmic Hospital, Moorfields, and the Central London Throat, Nose and Ear Hospital, Gray's Inn Road.

I spent several weeks in that city, dividing my attention between these two institutions. I saw some fine scientific work at both places, but the advantages to myself I must admit did not meet my expectations. Of course one can look on at the operations and see the work done. But if one wishes to get into the actual practice he must matriculate for a much longer period than a physician who has left behind him a good practice can afford to spend; and it is required of him to lumber through a great deal of elementary work that he does not need. For a young physician or student the facilities for work and study in London are excellent.

I take the following from "Regulations for Pupils and Clinical Assistants" in the Central London Throat, Ear and Nose Hospital: "Clinical assistants, two to each surgeon, will be appointed from the gentlemen who have enrolled themselves for attendance on the practice of the hospital, and they must guarantee to hold the office for at least six months. They will be required to take the notes of the new cases on the forms prepared. Clinical assistants when taking these notes of new cases are on no account to practice laryngoscopy, posterior rhinoscopy, internal digital examinations, Politzer's method of inflation or Eustachian catheterization; but they will be expected to make note of what is seen in the throat by simple oral examination and in the nares by anterior rhinoscopy."

Thus it will be seen that the clinical assistants can get an excellent schooling by being in constant attendance for from six months to a year, but the other gentlemen who have simply enrolled have the privilege of peeking over the heads of attending surgeons and getting what little benefit they can, which is very unsatisfactory to say the least. The rules and regulations of the Royal London Ophthalmic Hospital are virtually the same.

In Vienna, on the other hand, ample opportunities are afforded for the actual practice. In 1889 the physicians from

*Read before the Intercounty Medical Society at Eau Claire, Wis., November 13, 1894.

countries speaking the English language who were studying medicine in Vienna organized a society for the promotion of the common interests of its members, entitled the Anglo-American Vienna Medical Association. It now has a membership of about 340. This society has a suit of rooms at No. 12 Landesgerechts Strasse constantly open for the benefit of English-speaking physicians. Here you will find the honorable secretary continually in attendance, always alert and ready with a fund of information necessary for rapidly getting at the work desired. He keeps thoroughly posted as to the private courses in progress in each branch of medicine at Das Allgemeine Krankenhaus, Children's Hospital and Die Allgemeine Poliklinik, and also has a list of suitable lodgings and boarding-houses. In connection with these rooms is a library of English literature. I joined this association immediately upon my arrival and found it of great benefit to me.

The superiority of Vienna over all other cities for the study of medicine by the practicing physician consists, first, in the centralization of medical work, the great hospitals being all in the same portion of the city and no loss of time occurring in going from one to the other; and, second, in the special facilities for post-graduate study.

Special courses for graduates of medicine, of six weeks' duration and covering every branch of the medical science, are given the year round, whereas in other schools these post-graduate courses are only occasional. The price of these courses generally is one florin (forty-eight cents) per lesson. A class is usually limited to twelve persons, so that the instructor receives about five dollars per lesson. If a person wishes instruction on any particular branch and there is no course in progress at the time, he can easily procure this instruction for his own special benefit at five dollars per lesson. Most of these special courses are given in the General Hospital, or Allgemeine Krankenhaus.

In internal medicine, besides clinical lectures by Professors Nothnagel and Schrotter, private courses are given in the wards by their assistants, classes generally being limited to six. In surgery there are general clinics by Professors Billroth and Albert and private courses by their assistants on surgical diagnosis and operations. In dermatology there are, besides clinical lectures by Professors Kaposi, Neumann and Lang, private courses on skin diseases and syphilis in their wards and at the Poliklinik. In pathology there is abundant opportunity for observation, from six to a dozen post mortems being held daily at the Pathological Institute. These may be attended free of charge. Professor Kolisko also gives a special course of demonstration in gross pathology. In bacteriology special courses are given by Professors Gruber, Paltouf and Weichselbaum. Thus we might run through with each special branch; but I have given sufficient for illustration.

I enjoyed great opportunities for practical work on the eye, ear, nose and throat. The instructor would assign cases to us and we would make our own diagnosis, treat the cases and, if operations were required, perform them; all of course under his supervision.

Other English-speaking physicians whom I met were thoroughly satisfied with the work in their lines and were loud in their praises of the advantages for Vienna.

The General Hospital is among the largest in the world, containing some 2,600 beds. The number of in-patients treated each year is over 22,000 and the number of out-patients 120,000. There are about 10,000 births and about 2,600 deaths annually. Last year 13,052 operations were performed. Connected with this hospital are 22 head physicians, 60 first assistants and 150 second assistants. From 170 to 200 American and 70 to 80 British physicians annually go to Vienna for the study of medicine.

While I found it a great pleasure and of much benefit to be able to speak the German language, the want of that ability need deter no one from seeking the benefits of medical study in the Austrian capital. In almost every department the instructors speak the English language, and they are very careful that all unacquainted with the German shall receive the full and proper instruction in English. The younger instructors and assistants are particularly earnest in their study and practice of our language.

More Cemeteries Needed.

We shall not need an epidemic of cholera when the new diphtheria antitoxine begins to get in its work.

RECURRENCE OF SCARLET FEVER IN SAME PATIENT WITHIN ONE YEAR.

JOHN B. CRANDALL, M.D., STERLING, ILL.

Helen M., aged twelve, was taken with scarlet fever in March, 1894; was under treatment for some three weeks; had an ordinary period of fever, following with exfoliation of derma; convalesced with good recovery.

The rest of the family were isolated and escaped.

In November, same year, the same patient was taken with second attack of same fever. As the patient was under my care only a few months before, I fought and tried to vary my diagnosis and think it was symptomatic fever. The mother, who was an intelligent and close observer, pointed it out and said it was the same identical fever she had had in the early part of the year. I watched the case from the early fever to the formation of the scarlet rash. The strawberry tongue, exfoliation and all of the symptoms were so well marked that I was obliged to put up a scarlet-fever card for the second time within a year for the same patient.

The throat symptoms were less prominent during last sickness. None of the others—a brother and younger sister—was taken with the disease. The sister was sent away from home and the brother did not visit her room.

I mention this as a matter of record, for it is so unusual to have this disease duplicated. I have attended hundreds of cases, but never before have met with a similar experience.

THE USE AND ABUSE OF TOOTHPICKS.

The exciting causes of caries of the teeth are invariably external, and among these decomposition of food or of mucus between the teeth holds a prominent place. It follows that removal of such matter must be beneficial. One of the means of accomplishing this is the toothpick, which, judiciously used, is of undoubted value. Food lodges between the teeth from a variety of causes: the extraction of a tooth may lead to those contiguous falling apart and so leaving spaces; improperly filled teeth, such as those left with rough edges and not sufficiently "contoured," that is, built up to the original configuration of the lost part, will form food traps; irregular position of the teeth or recession of the gums—all these will act in the same way. Attention to the dental toilette before company is certainly inelegant, but it is not necessary here to approach the subject except from a medical point of view. Of the materials used as toothpicks the best is the quill with the sharp point removed, but with this, as with all other forms, care must be observed. By indiscriminate application the gums may be so irritated and injured as to cause recession and thus increase the existing trouble, or inflammation of the tooth membrane may be caused, a most annoying condition, and one in which the still more vigorous use of the toothpick gives temporary relief only in reality to add fuel to the fire. Metal toothpicks are good because blunt-pointed, but are too thick to pass between teeth at all close together. Wood need only be mentioned to be condemned, for it is a by no means uncommon occurrence for small fibers to become detached and jammed between the socket and tooth, leading to chronic periostitis and even loss of the tooth if the condition is not recognized. An excellent substitute for the toothpick, one having few objections and one which will save many a visit to the dental surgeon, is antiseptic, waxed, dental floss silk, which, passed between the teeth night and morning, will invariably reveal accumulations which have escaped the tooth brush.—*Lancet.*

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SATURDAY, JANUARY 26, 1895.

EDITORIAL.

MEDICAL SCIENCE VERSUS HUMANITY.

It is not often that a conflict arises between the humane treatment of a fellow-creature and the desire for knowledge whose ultimate purpose is the relief of suffering humanity. In a certain kind of fiction and in the sensational reports of college experiments and of clinical operations with which the press occasionally seeks to startle and entertain its vulgar patrons, the medical student and his teacher appear in an unfavorable light. Yet the credence placed in such "literature" must be slight, or a genuine hostility against the profession would be engendered. The falsity of such reports is, best of all, shown by the confidence which is reposed in the medical attendant by the very writers of the alleged horrors of the clinic and the amphitheater.

The profession as a whole must plead guilty to the charges of the various societies for the prevention of cruelty to animals, although such charges are usually greatly exaggerated, the intent of the experimenters ignored and the innocence of the vast majority of the profession entirely overlooked.

But in regard to the treatment of patients, the exhibition of cruelty or negligence is a rare exception. Even those physicians who are generally recognized by their colleagues to be thoroughly selfish and to be restrained neither by fear of God nor love of man, are often the very ones to whom a patient might most safely intrust himself, skill and ambition taking the place of benevolence and devotion. We recall a man, despised by his associates who knew him, hated by internes and justly feared by nurses, who nevertheless maintained a large practice and was almost worshiped by many of his patients. Such men, however, are the exception. It seems that the average man upon entering the practice of medicine assumes virtues and a sense of his respon-

sibilities that he would not have attained in any other life-work.

In striking contrast with this estimate of our own medical profession, we note in German literature a tendency to what seems to us a frank and wholly unconscious brutality. For instance, an abdominal section is made to inspect a liver, notwithstanding the almost positive diagnosis of hypertrophic sclerosis. Two pathologists, examining semen stains in preparing testimony in a case of rape, express their profound gratitude to Professor So-and-so for allowing them to inoculate a culture suspected to contain gonococci into the urethræ of two paralytics in the hospital ward of the latter. Another report describes the antagonistic action of acid solutions on the development of the germs of chancroid, fifteen persons having been inoculated in two places each, one sore being treated as indicated, the other being simply covered with a watch-glass in order to secure a control experiment.

Such a tendency is to be deprecated, not alone on the ground of sentiment, but because the habit of study purely scientific, as opposed to an endeavor at the same time to relieve suffering, blunts the perception to just those facts that are to be of vital importance to the practical physician. It is the neglect of the humane consideration of his patients that has made the typical German physician a poor therapeutist. The fact that the average medical article in a German magazine contains an elaborate history of cases, an exhaustive discussion of etiology and pathology, an exact though brief synopsis of symptoms and physical signs, a mere allusion to treatment and, as a matter of course, a minute report of the findings post mortem, is an index to a trend of medical thought that is opposed to the very existence of a medical profession. It is this trend that has, to some extent, justified the epithet "Hod-carriers of Science" as applied to our German brethren. It has brought about the purely mechanical consideration of the diseased human body. It is logical, if a man is too hot, to plunge him into cold water. The stimulating action of both heat and cold is ingeniously utilized by inducing labor by the alternate administration of a hot and a cold douche. Yet such logic needs the tempering of common sense. Just such therapeutic suggestions as these have led one of the shrewdest of American physicians to say, "I distrust on general principles any therapeutic method originating with the Germans."

We have no sympathy with those who attempt to cover their ignorance of fundamental facts in medicine by denouncing scientific study as impractical. Such men give digitalis in cardiac hypertrophy and aneurism and try to overcome ether-poisoning with injections of alcohol. Neither do we intend to incriminate the whole German profession nor to ignore the vast debt of gratitude which we owe them. Nor, again, do we advocate a neglect of scientific study and a return to the benevolent but ill-guided ministrations of a semi-medical priesthood. Let us realize, however, that the ultimate aim of all medical investigators must be practical—in other words, humane. Wherever advantage may be taken of suffering already existing, it is right—indeed, it is a duty—to do so. But we cannot condemn too severely the man who inflicts damage to gain information. Occasional infringements on the law of humanity will react on the medical profession to the extent to which they are known by the laity. A general following of such examples will remove our very reason for existence as a profession.

Modern Sacrificial Methods.

The sacrifices of Abraham, Isaac and Jacob were not in it when compared with the number of animals which must be destroyed to obtain sufficient poison to relieve an engorged population.

ABSTRACTS.

SUPRAPUBIC PROSTATECTOMY.

A. W. Mayo Robinson, of Leeds, reports (*Brit. Med. Jour.*) a series of 12 cases in which he has performed suprapubic prostatectomy during the interval including December, 1887, and January, 1894. The ages of the patients ranged from sixty-one to seventy-three years, three of them being of the latter age. Only 1 death was attributable to the operation. In this case the fatality was due to suppuration between the bladder and rectum caused by overdistention of the rectum by the colpeurynter. One patient died from senile asthenia some weeks after the operation, having fully recovered from it and having regained the power of voluntary urination by the urethra. The remaining 10 were all restored to health, with natural powers of micturition.

The author recommends the following technique: Besides aspecticizing the skin by a previous carbolic dressing and washing out the bladder with boracic lotion, he gives the patient five to ten grains of boracic acid and a little saccharine thrice daily for a few days before operation, so as to render the urine aseptic if possible. The rectal bag, by raising the prostate nearer to the manipulating finger, is of advantage, but it is important not to overdistend it, lest rupture of the rectum or inflammation of the meso-rectum ensue, for which reason he only has four or at most six ounces of water introduced. The bladder is distended with boracic lotion until it can be felt above the pubes, no fixed quantity being employed. In 2 of his cases the peritoneum was in touch with the pubes, and in 1 case it was so fixed to it that he had to deliberately open the serous membrane to reach the bladder, after which he carefully separated it and closed the peritoneal opening before incising the bladder, the patient being no worse for the complication.

In removing the obstruction he has found McGill's scissors or the cutting-ring forceps invented by Jessop to answer best for the sessile or pedunculated enlargement of the middle lobe; and for the ring-like obstruction he has used the scissors, first at one side and then at the other, so as to cut out a V-shaped portion, making a clear channel from the vesical pouch straight into the urethra, down which the finger is passed to see that the passage is clear. If the lateral lobes are much enlarged the finger can be insinuated within the capsule and the adenoid masses can be enucleated with very little difficulty. Lastly, all loose pieces of tissue are cut away and the parts are left as smooth as possible. In order to disturb as little as possible the cellular surroundings of the bladder, the edges of the vesical opening are fixed temporarily to the margin of the wound by a suture on each side before any intravesical manipulations are commenced.

Suprapubic drainage was sufficient in all cases, and it was not necessary to drain through the perineum. In the after-treatment boracic acid was given thrice daily, and the bladder was washed out once or twice daily by syringing a solution of boracic acid through from the urethra to the drainage opening. The drainage-tube was removed, if possible, on the third day, and the patient allowed to sit up within a few days of the operation. As a rule, recovery was attended with very little general disturbance or discomfort, and the urine began to be passed by the urethra soon after the patient was allowed to sit up.

The author considers that the operation of suprapubic prostatectomy in properly selected cases is one attended with less danger than is usually thought, and that if thoroughly and completely performed it is capable of affording such relief as may be in many instances genuinely termed a cure, and that in a class of cases which until a few years ago were looked upon as incurable.

Poisoning by Sulphonal.

One of the first symptoms of poisoning by sulphonal is said to be an increased dark red discoloration of the urine, due to the presence of hematoporphyrin.

THE REAL VALUE OF THE MEDICINAL PEROXIDE OF HYDROGEN PREPARATIONS FOUND IN THE MARKET.

My attention having repeatedly been called to several reports and analyses made by different chemists and published by some medical journals, I concluded to examine all the brands of peroxide of hydrogen which I could find on the market, in order to ascertain the real value of each when intended to be used as an antiseptic remedy, both internally and externally.

The reports on the subject which have come to my knowledge are quite contradictory, and my object is to impart to the medical profession the results of my experiments, which have been made on fourteen fresh samples, purchased by me in duplicate directly from the manufacturers or their selling agents.

These brands have been tested for the volume of available oxygen, the amount of residue, the degree of acidity and the amount of soluble baryta salts contained therein, as per following table:

No. 1. John Bene's peroxide of hydrogen medicinal.	*10.50	†0.1886	‡2.19	⁋None
" 2. Hydrozone	27.35	0.2180	3.11	None
" 3. Larkin & Scheffer's peroxide of hydrogen medicinal	9 65	0.1206	6.75	None
" 4. Mallinckrodt's peroxide of hydrogen medicinal	9 55	0.1408	1.43	None
" 5. Marchand's peroxide of hydrogen medicinal	16.55	0.564	1.29	None
" 6. McKesson & Robbins' peroxide of hydrogen medicinal	10.95	0.0540	0.44	None
" 7. Merck & Co 's peroxide of hydrogen medicinal	0.50	0.2418	4.57	None
" 8. Oakland Chemical Co.'s peroxide of hydrogen medicinal	10.50	0.0382	0.34	0.0017
" 9. Peuchot's peroxide of hydrogen medicinal	10.60	0.4674	1.77	0.0018
" 10. Powers & Weightman's peroxide of hydrogen medicinal	8.40	0.0830	2.03	None
" 11. Pyrozone, 3 per cent	11.20	0.0534	0.76	None
" 12. Rosengarten & Sons' peroxide of hydrogen medicinal	3.10	0.1002	0.25	None
" 13. Smith, Kline & French Co.'s peroxide of hydrogen medicinal	6.15	0 0880	2.6	None
" 14. E. R Squibb's peroxide of hydrogen medicinal	12.40	1.004	12.04	None

* Volume of available oxygen, determined by means of a solution containing 5.665 grams of permanganate of potash per liter of distilled water.

† Residue obtained from 100 c.c. of peroxide of hydrogen dried at 120° C.

‡ Acidity expressed in cubic centimeters of normal volumetric soda solution for 100 c.c. of peroxide.

⁋ Baryta found in soluble baryta salts contained in 100 c.c. of peroxide.

By referring to this table it is easily understood that sample No. 2, "hydrozone," is far superior to any other brand which has ever been made, not only on account of its containing a much larger amount of available oxygen, but also owing to the presence of a small quantity of several essential oils, the respective nature of which could not be determined, very likely because they have been submitted to the oxidizing action of peroxide of hydrogen before being used to make "hydrozone."

I attribute to this small quantity of essential oils the great superiority of hydrozone over any other brands of H_2O_2 as a healing agent.

When hydrozone is diluted with distilled water in the proportion of half and half, the resulting mixture contains about 13.5 volumes of available oxygen, and its bactericide power still remains the same as the bactericide power of sample No. 5, which contains 16.55 volumes of available oxygen.

Sample No. 14 comes next to sample No. 5, but it is readily seen that the degree of acidity is entirely too large for a preparation which is to be applied to the most sensitive diseased mucous membranes.

Sample No. 11, called "pyrozone," which contains 11.20 volumes of available oxygen, is quite similar to sample No. 6, with the exception that the latter contains a small quantity of salicylic acid. Very likely the salicylic acid has for its object to increase the bactericide power, but, unfortunately, I fear that it impairs the keeping properties of this preparation.

Acidity.—The fourteen brands which I have examined contain free acids (phosphoric, sulphuric, muriatic); and I must say that peroxide of hydrogen medicinal should never be made neutral before using, even in the most delicate cases. Neutral peroxide of hydrogen rapidly decomposes under all conditions of exposure.

The keeping properties of H_2O_2 solutions vary a great deal with the degree of purity and the percentage of free acids contained therein.

If the proportion of acid is too large, the profession well know that it acts as an irritant upon diseased surfaces. If it is too small, the solution does not keep well.

My opinion is that a standard solution of medicinal H_2O_2 must answer the following tests:

1. It should contain at least 15 volumes of available oxygen.

2. The quantity of free acid contained in 100 c.c. should require not less than 1 c.c. and not more than 3 c.c. of normal volumetric soda solution, to be made neutral. Such a small quantity of free acid is not objectionable.

3. It should not contain any soluble baryta salts.

4. It must be free from sediment.

It is to be noticed that the brands No. 7 and No. 12 are valueless.

The brands No. 8 and No. 9 are not fit for medicinal uses, owing to the fact that they contain traces of soluble baryta salts.

The brand No. 3 has a heavy sediment of sulphate of baryta, which may be considered inert toward the system, but it is certainly detrimental to the keeping qualities of this preparation.

Brand No. 14, which is sold as a 10-volume solution, is really 12 volumes, but it is too acid. Brand No. 5, which is sold as a 15-volume solution, is really 16.55 volumes, viz., about 10 per cent. above the standard.

The brand No. 2, which is sold without any mention of volume, is really a 27.35-volume solution, viz., 90 per cent. above the standard.

None of the other brands comes up to the standard, but on the contrary they run from 35 to 55 per cent. below.—*H Endemann, Ph.D., in Times and Register.*

A REPORT OF THREE CASES OF ADDICTION TO COAL-TAR DERIVATIVES.

Jeff. Suttle Davis, M.D., Health Officer of Shelley County, Montevallo, Ala., writes (*Amer. Med.-Surg. Bull.*):

During the last decade coal-tar derivatives have been largely employed as antipyretics, analgesics and anodynes. As they all have a powerful effect on the nervous system, it is but natural that they should be habitually indulged in; and as they are easily obtained, the wonder is that so few cases have been reported.

These drugs are unfortunately becoming household remedies and if their sale be not restricted much mischief will inevitably result from their indiscriminate use. Only last winter I was called to see an eighteen-month-old child almost fatally cyanosed from an overdose of acetanilid, administered by its mother. There was complete absence of the radial pulse, and the heart-beat was so feeble that it could scarcely be detected. Cold sweat bathed the body, and the rectal temperature was 97° F. After working several hours signs of reaction appeared, and I finally left the little fellow completely relieved. Atropine hypodermatically and external heat gave me the best results in this case.

As will be seen from the reports, the habit was discovered in all three cases accidentally, and it is my opinion that many cases of addiction to these various products are unrecognized by the physician. My attention was first called to the danger of their long-continued use by a brother physician, who, several years since, favored me with a report of a case of sulfonal habit. The patient was a gentleman thirty-two years of age, for whom sulfonal had been prescribed for insomnia of a year's duration. Being of a supra-nervous temperament, it was not long until he desired to be constantly under its influence, and instead of the twenty-grain dose at bedtime he took six such doses daily. His condition was pitiable in the extreme, anorexia being so marked and constant that he was gradually dying of inanition. His nervous system was a complete wreck, his condition being one of listless apathy, alternating with coma-vigil; sound sleep entirely absent; constipation marked and urinary secretion scant. Every effort to cure him had failed. I do not know how the case ultimately terminated. Since hearing of the case I have noticed reports

of several similar ones in medical journals, but never observed one in my own practice until about eighteen months ago.

CASE I.—In January, 1892, I was called to see Mr. T. W. C., sixty three years of age, who was suffering with chronic bronchitis and palpitation of the heart. Very profuse and offensive expectoration with frequent cough and much emaciation. Had suffered from bronchitis about two years, although much better at times. Cardiac complication was of only a few weeks' duration. Pulse weak and rapid, being about 160 while in recumbent position, but the slightest exertion, even the act of rising, would cause a severe palpitation. No appetite and stubborn constipation. He complained of perspiring very freely, and stated that he often had profuse night-sweats during his first sleep. Considerable cyanosis was noticed about face, which I learned was often very much more marked than on that day. Exceedingly nervous.

Prescribed codeine, creasote, fluid extract grindelia and pure cod-liver oil for the bronchitis, and for the palpitation strychnine and digitalis. Also had 10 grains of quinine daily. A rich and concentrated diet was directed, with artificial digestive agents when indicated. Very much to my surprise, there was but little improvement after a two weeks' course of this treatment.

In speaking to my druggist in regard to the stubbornness of the case, he remarked incidentally that the patient bought large quantities of acetanilid, and it at once occurred to me that I was dealing with a case of acetanilid habit. He denied the charge at first, but finally confessed. It was prescribed for neuralgia about one year previous, and, liking the effect, the patient continued to use it. At first the quantity did not exceed 10 grains daily, but at this time he was taking not less than 30 grains daily, and he was confident that he had taken a dram in twenty-four hours! His appetite commenced to fail two months before I was called, and his condition had gradually become worse until he was constantly confined to his bed.

The bronchitis existed before the habit was contracted, but I was certain that the other symptoms could be attributed to the acetanilid, and so informed him. His urine, he said, was about normal in quantity, but when examined the specific gravity was 1006 and it contained a large amount of albumin. It was tested every day for a week, and albumin was found each time. I reduced the acetanilid one-half at once and gave strychnine ($\frac{1}{30}$ grain) hypodermatically four times daily. No other change was made in the treatment, and in two weeks the quantity was reduced to 10 grains daily. He suffered with diarrhœa and had several "sinking spells" during this time, but was evidently much better.

He positively refused to consent to a further reduction in the acetanilid, although he continued to improve under the treatment, and was in a few weeks more relieved from the terrible palpitations, although his heart remained quite weak. His urine also improved, but was never entirely clear of albumin. When discharged he was able to walk about the house, and his appetite was improving. His cough was also much better. I have given him several "tonics" during the past year, and he is now able to drive into town daily. He says that he will never let acetanilid "get the best of him again," as he intends to hold it down to 10 grains daily. He thinks that quantity really makes life more enjoyable, and says he intends to take it while he lives.

CASE II.—Several months after discharging the above case I was called to see Mr. J. M., thirty-two years of age, who was ill with articular rheumatism. I had only been in his room a few minutes when I noticed that his face, especially the lips and adjacent parts, was decidedly cyanosed. His hands were cold and covered with a sticky perspiration. He was very nervous and quite anæmic. I learned from his wife that his appetite was very poor and that his bowels never acted except with cathartics. He slept very little and complained of almost constant tinnitus aurium with an occasional explosive sensation in the ear. Perspired freely during the day and at night had profusive and prostrating sweats.

Suspecting Bright's disease from these symptoms, a specimen of urine was obtained for analysis. The result of examination was specific gravity 1012, with considerable albumin. He did not believe that the quantity was materially changed. Had suffered from recurring attacks of rheumatism for about two years, though

it had never been very severe. The circulation was very weak and rapid, but there was no evidence of endocarditis or valvular trouble. He informed me that his condition was often very much better than it was on the day I saw him, the cyanosis being only occasionally present, and the other symptoms were seldom sufficiently severe to detain him from his work.

I prescribed for the rheumatism and promised to call on the following day. His wife followed me from the room and informed me that for eight months he had been taking four large capsules of acetanilid daily, and that his health commenced to fail after he had contracted the habit. It was prescribed for the rheumatism. She said that often when he had taken an unusually large amount his face would be very dark, and that at such times he often complained of a shortness of breath. These debauches always left him in his present condition. Ordinarily he could attend to his duties as clerk in a general mercantile establishment, but she found the habit was rapidly gaining on him. On my next visit I told him that I had found the drug in his urine and believed that he was taking it. He confessed at once, but would not admit that it had anything to do with his condition, as it "was necessary for him to take it."

He would fill the body of a No. 0 capsule loosely with acetanilid and pack the cap with quinine, and take from 4 to 6 of these in twenty-four hours. As each capsule contained 7 grains of acetanilid and 2 grains of quinine, his daily quantity was from 28 to 42 grains of the former and from 8 to 12 grains of the latter. He talked very freely in regard to the effects of this mixture, saying that it was a very pleasant sedative, without any bad after-effects. He could not realize that it was slowly killing him, but finally agreed to "quit a while" and watch the effect.

I reduced his daily quantity by one-half at once, which was followed by considerable depression and uneasiness about the heart, with vomiting. He was treated with strychnine ($\frac{1}{30}$ grain) hypodermatically, whisky and chloral in full doses at night. The first few nights he slept but little, and until the third day everything swallowed was promptly vomited. Whisky and liquid peptonoids were given by the rectum, as was also the chloral. Morphine hypodermatically in $\frac{1}{4}$ grain doses would always promptly relieve the "nervous spells" with which he frequently suffered during the first week. By the end of the second week the drug had been entirely withdrawn, and in one month he was in excellent health, all the unpleasant symptoms having gradually disappeared. I hear, however, from information recently received, that after going without the drug for eight months he has again contracted the habit. He continues to suffer with occasional attacks of rheumatism, and in an unguarded moment has probably taken a dose for the relief of pain and relapsed. I have not seen him in some time and understand that his health is again bad.

CASE III.—Recently, while attending a lady in labor, the husband of Mrs. M., a neighbor, called me hurriedly to the gate and requested a large dose of phenacetine for his wife. As I did not have it, I proposed to substitute something else that would relieve her until he could send to the drug store, distant a few miles. Nothing else, he said, would do, and I thought nothing more of the matter until I was in the act of leaving for home two hours later, when I received a hurried message to go to the lady at once. When I arrived I found her in an apparently alarming condition. She was deathly pale, and before I could cross the room to her bed she had a convulsion. No coma followed this convulsive attack, and in a few moments she was again sitting on the edge of the bed, vomiting profusely. In a few minutes she was walking the floor and occasionally screaming that she was dying.

It was not difficult to recognize the hysterical element in this case, but I had a hasty consultation with the husband and learned the cause of her alleged approaching death. For several months she had been taking phenacetine regularly, having commenced it for the relief of an almost constant pain in the top of her head. On the night before while taking a dose she had accidentally lost her supply. As she had never been without it before, neither she nor her husband anticipated the great disturbance to follow. On the following morning while at breakfast she began having "nervous spells," as he expressed it, and told him to go to town for some phenacetine. Soon after this she commenced to vomit and remarked that she

felt "dead all over." It was then that he came to request a dose of the drug from me, and as I could not supply him he made a hurried trip to the drug store for the phenacetine. Unfortunately the druggist's supply had also run out, but he was expecting to receive some by the evening train. When he informed his wife of this on his return she "immediately grew alarmingly worse" and had several hard convulsions at once.

She had had more than a dozen when I reached the house. She was very pale and was covered with a cold perspiration. Pulse 170 and almost imperceptible at times; respiration 30 and spasmodic. She had vomited an almost incredulous amount, and was at this time vomiting a glassy-looking mucus, mixed with bile. None of the convulsions was followed by coma. Kidneys acting profusely, and during the last convulsions before my arrival she had passed a very large watery discharge from bowels. Pupils enormously dilated, but she was so nervous that I could not ascertain the amount of reaction to light. I at once administered morphine sulphate, $\frac{1}{4}$ gr., atropine sulphate, $\frac{1}{150}$ gr., and digitalin. This quieted her considerably in about fifteen minutes, but it was necessary to repeat the morphine in an hour, at which time I gave $\frac{1}{4}$ gr. without atropine. After this she slept several hours and in the mean time the phenacetine was secured.

In a few weeks I was called to see her little girl, and took advantage of the opportunity to question her in regard to the habit. As stated elsewhere, she had been addicted to the phenacetine for about seven months, and her daily quantity at that time was between 15 and 20 grains. She was very positive that her health was better than before she commenced it. Her complexion was extremely bad, though anæmia was not present to the extent observed in the other cases. Circulation at this time weak and pulse 124; never had palpitations or profuse sweats. Appetite tolerably good, but digestion not what it should be. Constipation is present, but she claims that it existed before habit was contracted. Kidneys act very well. Does not sleep as she should, but does not have disagreeable dreams. Had not menstruated in two months, but may be pregnant. Last time the flow was very scant, which is very unusual. Is often quite dizzy, especially when attempting to move after sitting some time. Has frequently narrowly escaped falling on such occasions. I obtained specimen of urine and found on examination that it contained no albumin, although the specific gravity was about 1012. Have tested urine several times since with similar result. I learned that the attack she had on the first morning I saw her was the first that she had ever had. A neighbor who had known her since childhood informed me that she had never been in the least hysterical.

The patient positively refused to discontinue the drug, saying that her health was better than it had been in years. The husband and neighbors, however, could not agree with her on that point, as only a short time before she was a healthy, buxom country girl.

In summing up these cases, it will be observed that a weak heart, anæmia, indigestion, insomnia, constipation and neurasthenia were conditions more or less marked in each case. Albuminuria was present in two cases, while in the third case the specific gravity was quite low. In two cases there was an almost constant perspiration with occasional prostrating night-sweats. A marked recurring cyanosis was also observed in two cases. These were the most prominent symptoms and can very reasonably be accepted as those to be expected in similar cases.

It is also seen that the symptoms following the withdrawal of these drugs in cases of addiction resemble very closely those following the withdrawal of the narcotics in similar cases, *i.e.*, depression, insomnia, vomiting and diarrhœa.

Strychnine hypodermatically, with morphine when necessary to relieve "nervousness" and chloral per rectum at night, gave the best results in the treatment.

Chloral Hydrate in Hæmoptysis.

Dr. J. Palvy has tried chloral hydrate in 15 cases of hæmoptysis. Doses of 15 to 25 grains (1 to 1.6 grams) were injected per rectum. They are reported to have produced an effect within one-half to three quarters of an hour.

The chloral hydrate, besides, seemed to be also a valuable prophylactic. The author describes several cases in detail and recommends a further trial of the remedy. —*Amer. Medico-Surg. Bull.*

THE TREATMENT OF TYPHOID FEVER.

Of all the branches of the medical sciences, it is hygiene upon which we have to look as most promising study and the branch of medicine to which belongs the future; for notwithstanding the great progress that has been made within the last few decades in the etiology of diseases, the treatment in many instances is not much further advanced than it was several decades ago. We still have to rely more upon scientific nursing than upon the healing powers of drugs, and in many instances the patients will do better without any medication whatever excepting, perhaps, when it is used for the psychical effect upon the patient. The rules laid down by Sir William Gull could not be improved upon at the present day. Gull's views with regard to the treatment of typhoid fever were as follows:

1. Typhoid fever is a disease which runs a more or less definite course. It cannot be stopped or cured by medicines.

2. The chief thing to be done at the outset of an attack is to send the patient to bed, so as to save strength from the beginning.

3. No strong purgative medicines are desirable.

4. As the fever develops and the strength grows less light food should be given at short intervals—*i.e.*, water, toast-water, barley-water, milk and water, light broths (not made too strong or too gelatinous).

5. If there be restlessness or much agitation of the nerves, wine (port, sherry or claret) or brandy in moderate doses at short intervals. This must be directed medically, but in general it may be said that the amount required is that which induces repose and sleep.

6. The bowels may be left to themselves. If unmoved for twenty-four or thirty-six hours a lavement of warm water may be necessary, but this will be directed medically.

7. The restlessness or wakefulness in fever is best remedied by the careful giving of wine or spirit with the food or in hot water. Sedatives such as opium are inadmissible—mostly injurious.

8. The bedroom to be kept at a temperature of 62° to 65° F.

9. Great care is necessary to keep the bed clean and sweet. This is most easily done by having a second bed in the room, to which the patient can be removed for two or three hours daily while the other is thoroughly aired and the linen changed.

10. All fatigue to be sedulously avoided. No visitors admitted and no other person but a nurse and one attendant to help her.

11. Patient's room never to be left unattended for a moment, as in the delirium of fever he may jump from bed and injure himself.

12. As to medicines and the treatment of complications, the immediate medical attendant must be responsible.

13. As it is possible that the discharges from the bowels in typhoid fever may be a source of contagion, it is desirable that before being thrown down the closet they should be largely mixed with Condy's fluid or some other disinfectant. On the same principle the strictest cleanliness must be observed in the sick-room.

14. There is no reason to believe that typhoid fever is contagious from person to person in the ordinary way. The largest experience shows that it does not extend, like an ordinary contagious disease, to nurses or others attending upon patients suffering under the disease.—*Med. Review.*

M. Pasteur on Rabies.

M. Pasteur addressed the following reply to a lady who wrote to him for information respecting the symptoms of rabies (*Med. Rec.*): "M. Pasteur has had the pleasure of receiving your letter. The bite of a dog is only dangerous when the dog has got rabies. If there is any doubt in respect to this, the manner in which it may be found out is the following: Put the dog that has bitten where it can do no further harm. Have it examined by a vet., and if it has the rabies its characteristic symptoms will not be long of being observed, and the animal will certainly die in eight days. If at the end of that time no symptom of rabies has been observed, the bite cannot cause hydrophobia and there is no reason that the animal should be destroyed."

HEMORRHOIDS—OUTERBRIDGE'S OPERATION.

Administer a laxative on the second night preceding the day of operation, which will cause a thorough evacuation of the bowels and an interval of rest of from twelve to twenty four hours. The rectum will then be empty at the time of operation, avoiding the excessive peristalsis and rectal tenesmus generally complained of. Unless necessary, do not cut away hair, as the short hairs cause considerable irritation for two or three weeks after operation. Make the anæsthesia sufficiently profound, in view of the fact that the sphincter reflexes are almost the last to be abolished. Dilate the sphincter ani with the thumbs, bringing the hemorrhoidal mass into full view. Thoroughly scrub the anal region and wash the mucous membrane well above the operative field with tinctura saponis viridis and warm water. In cases with only external "tabs" or with three tumor-like masses inside the sphincter ani, insert the point of a tenaculum into the most prominent portion of the "tab" or tumor, or grasp it with a pair of thumb-forceps. Make enough traction at right angles to the gut to clearly define the mass. Surround it with the blades of a pair of scissors (curved on the flat) pressed well toward the muscle, and remove the diseased tissue with one or two cuts. Unite the elliptical raw surface by a continuous catgut suture. Amputate and suture each distinct mass in the same manner.

In cases where the whole hemorrhoidal "inch" is dilated, thoroughly dilate the sphincter, causing the hemorrhoidal ring to protrude from the anus. Grasp a part of the mass with the thumb-forceps, and with the curved scissors cut away a strip of mucous membrane and hemorrhoidal tissue down to the muscle, following the line of the muco-cutaneous junction all around the lumen of the gut. Remove a second or third strip if the size of the mass renders it necessary. If external hemorrhoids are also present, in order to prevent recurrence of pruritus and the numerous discomforts usually following the ordinary operation in that region, remove a strip of skin down to the sphincter ani in the same manner. Bring together the free edges of the skin and mucous membrane with a continuous catgut suture, taking a double stitch at two or three points in the circumference of the bowel to interrupt the sutures and avoid the necessity of tying. Should bleeding occur at any point immediately after suturing, an extra suture at that point will at once control it. If during the removal of the mass any vessel bleed excessively, it can be quickly controlled by at once beginning to suture.—*A. E. Gallant in Mathews' Med. Quart.*

On the Inheritance of Stuttering.

Instances of the development of stuttering in children of stuttering parents in which the influence of environment and imitation can be positively excluded are of sufficient rarity to make the following case, reported by Professor Epstein (*Prag. Med. Woch.*), of interest:

A woman consigned her ten-day-old child to the charge of a foundling asylum, from which it was immediately sent into the country, where it remained until six years of age. The parents then reclaimed the boy. He was therefore brought back to the asylum, where it was found that the intelligent, well-developed child stuttered so badly as to render his speech at times almost unintelligible. On the arrival of the parents it was discovered that the father, who had never seen the child, suffered in a marked degree from the same trouble. He had stuttered, he asserted, since childhood; no other members of his family had been afflicted in the same way.

Anal Incontinence.

Dr. Gersler (*Med. Rec.*) reports a case of rectal incontinence in a boy aged seven that was complicated by prolapse of the bowel, in which he succeeded in producing a cure by twisting the bowel upon its axis 360° after having dissected the anus and two and one-half inches of the rectum loose from the surrounding tissue. Strict asepsis with primary union and careful suturing of the anus in its new position are the two points that must be observed to make the operation a success.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Treatment of Peripheral Neuritis.

Professor Leyden believes that in the case of neuritis following acute specific diseases, care during convalescence as to nourishment, rest in bed and avoidance of over-exertion contribute to prevent its occurrence. "Etiological treatment" (removal of the cause) in neuritis due to alcohol or lead and treatment of the primary malady as in diabetes is of the first importance. There is no specific remedy for multiple neuritis, and treatment by drugs does not play a very important part. Owing to the fact that rheumatism is not infrequently an element in the etiology, salicylate of sodium and other anti-rheumatic drugs had been used, without producing any good results in the majority of cases. Iodide of potassium was of use only now and then, and mercury was of doubtful value. Antipyrin, phenacetin, exalgin, euphorbia and methylene blue were sometimes of use for the relief of pain, but it was often necessary to resort to morphine, chloral, sulphonal, etc. Strychnine, formerly much used, but lately fallen into the background, deserved to be tried; by increasing the excitability of the affected muscles it favored the return to normal functions and nutrition; it ought especially to be resorted to in progressive cases in which the respiratory movements were threatened. Leyden prefers to use it as a subcutaneous injection, 1.70 gr. to 1.20 gr. twice daily. Massage and baths were valuable auxiliaries which were indicated, especially the latter, in the later stages of the disease. General hygienic treatment was of much importance. Rest—as a rule rest in bed—was of the first importance in the early stage; in the later stage, feeding. Finally, in the latest stages of all, moral suasion, rousing the patient's latent energies, was often of great value. Passive movements and encouraging the patient to make active movements were generally attended with better results than massage in this stage. Electricity, formerly used too much, was now used too little, but its usefulness was greatly limited by the fact that in many cases the pain caused was too great to permit the treatment to be continued.—*Berl. Klin. Woch.*

Treatment of the Vulvitis of Little Girls.

In the *Revue Obstetricale et Gynecologique* the treatment of the vulvo-vaginitis in children is summarized as follows: During the first stage, when the parts are inflamed and swollen, they should be bathed with starchy and emollient lotions and covered with compresses saturated with a boric solution 1:100, a sublimate solution 1:10,000, or carbolic-acid solution 1:100. The active inflammation being arrested, the parts should be well dried with absorbent cotton and dusted with a powder of iodoform, 4 grams, tannin, 1 gram, and bismuth subnitrate, 6 grams; the labiæ should be kept separated by a pledget of absorbent cotton. When the inflammation extends into the vagina, about 30 grams of the following mixture should be injected: Glycerin, 100 grams, alum and cocain hydrochlorate, each 1 gram. The injection must be repeated after each act of micturition and must be followed by the iodoform insufflation. If desired, the injection may be replaced by the introduction of a small vaginal suppository made from the following, divided into 15 small filiform bougies having a diameter not exceeding 5 mm.: Iodoform, 8 grams; gum tragacanth and cocoa-butter, each 10 grams. Finally, the general treatment is of the greatest importance. The children should be built up and sent to the country or seashore. Cod liver oil, iron iodide and the phosphates are especially indicated.

What Small-Pox Can Do.

At the time of the announcement of vaccination by Jenner small-pox caused more than one-tenth of all the deaths of the human race. Fifty million people died in Europe from small-pox during the eighteenth century (*Med. Rec.*). In the sixteenth century the disease appeared in Mexico, and 3,500,000 of the population yielded up their lives in a few years, leaving some provinces almost depopulated. In 1707 in Iceland 18,000 died in one year, the entire population being but 50,000. Seventy per cent. of the people of Greenland died of small-pox in 1734. Small-pox is the most fearful disease with which the human race has ever been scourged. Macaulay tells us it was always present, filling the churchyards with corpses and leaving on those whose lives it spared the hideous traces of its power. "If a modern traveler," says Dr. Hyde, "could be transported to London in the early part of the present century, no peculiarities of architecture, dress or behavior would be so conspicuous as the enormous number of pock-marked faces he would encounter at every turn." It spared neither rich nor poor and even invaded the palace of the king.

The Relation of Eczema to the Mucous Membranes.

Von Sehlen calls attention (*Monat. f. prak. Dermat.*) to the relation which exists between eczema of the skin and certain diseases of the adjoining mucous membranes. Inflammation of the nasal mucous membrane, chronic catarrh of the external ear, conjunctivitis, balanitis, inflammation of the anal mucous membrane with the formation

of fissures, are some of the affections which may arise from the extension of an eczema. In the treatment of these the author has found ichthyol of great service. The paper concludes as follows:

1. Chronic eczema of the skin may attack the adjoining mucous membranes and pro duce upon them apparently independent affections

2. Eczema of the lips, catarrh of the exter nal ear, eczema of the lids, and a certain form of conjunctivitis are to be regarded as special localizations of the eczematous process, and are to be treated accordingly.

3. Certain inflammatory conditions of the anal mucous membrane and of the genitalia in both sexes seem to stand in close, if not causal, relationship to eczema of the skin.

A Study of Certain Remedies in Chronic Epileptic Insanity.

A physician in the Tuscaloosa Hospital for the Insane summarizes (*Amer. Jour. Insanity*) the effects of treatment by various means in 55 cases of epilepsy and insanity as follows:

1. Borax, antipyrin, acetanilide, phenacetin, and many other alleged anti epileptic agents are, save in rare cases, without influence over the course of chronic epilepsy with insanity.

2. Beta-naphthol is occasionally beneficial, but probably not more so than catharsis.

3. The bromides will postpone the occurrence of the convulsions, but in most cases do more harm than good.

4. In dealing with the maniacal attacks, seclusion may be necessary. Sedatives should be employed very rarely, if at all.

5. The best single remedy in the status epilepticus is blood-letting. Of drugs the most valuable is chloral.

Cannabis Indica.

Mackenzie (*La Semaine Med.*) speaks highly of cannabis indica in all forms of cephalalgia. He has found it act favorably even in the severe headache attending cerebral growths. In chronic uremia, where opium is contraindicated, it is especially serviceable. He has found the remedy to be almost a specific for that continuous form of headache which begins in the morning and lasts all day. In these cases the pain is generally dull and diffuse, but marked by occasional exacerbations. While it is rarely severe enough to interfere with occupation, yet it constitutes a source of constant annoyance to the patient. In such case the author administers morning and evening from one-twelfth to one-half grain of the extract in pills. If these doses are not sufficient, he gives one grain in the evening and one-half grain in the morning. In very obstinate cases the dose is still further increased, the larger dose always being taken in the evening, until relief is afforded or toxic symptoms become manifest. In some instances Mackenzie combines gentian, cinchona or hydrobromate of caffeine with the cannabis indica. In various neuralgic affections, gastralgia, enteralgia, the pains of tabes the drug often proves very useful.

In skin diseases associated with intense itching, particularly senile pruritus, where local applications fail to relieve, cannabis indica is often used with great benefit. The author has rarely observed any untoward effects from its use, nevertheless, to avoid toxic manifestations, the drug should be given at first in small doses, the latter being gradually increased.

Chloroform in the Treatment of Chorea.

When the convulsive movements of chorea are of sufficient severity to interfere with the digestion of food or sleep is prevented by the attacks, there is great danger of rapid exhaustion, and even death may be apprehended In such cases chloroform will prove a veritable boon. Not only will the anæsthetic induce perfect relaxation and relief from the present attack, but the insensibility produced by it often passes into natural sleep, and the patient awakes refreshed and completely rested, with marked abatement of the hitherto constant movements. The improvement in some cases is marvelous. Not only is the sufferer allowed a much-needed rest by this means, but the attacks are delayed, their intensity mitigated, nourishment may be taken with relish, and a decided change in condition results. In the beginning it may be necessary to use the chloroform three or four times daily, but as improvement occurs only one administration in the twenty-four hours will be found necessary. Usually a month is required before the permanency of the cure is established.—*Louisville Med. Jour.*

Treatment of Delirium Tremens.

In the New York *Medical Journal* Bellamy concludes an article as follows:

1. Delirium was controlled with greater rapidity and safety by trional than by other hypnotics.

2. In the majority of cases a marked stimulant effect was observed, possibly on account of the methylic elements which enter into the composition of the drug.

3. On account of the low temperature noted in all cases, trional must possess antipyretic properties, thereby simulating its allies of the phenol group.

4. Trional was always well borne by the stomach, and in one case was rapidly absorbed when administered per rectum.

5. No unpleasant after-effects were observed, and in all cases recovery was speedy with the exception of two.

Face and Tongue Varicose Veins.

Dr. Ida R. Gridly, of Collinsville, Conn., reports (*Med. Rec.*) the case of a fifty-nine year-old woman whose tongue on both the upper and lower surfaces was much ridged, furrowed and studded with irregular elevations, some the size of a large pea. These elevations were soft, purple and but little covered with the ordinary coating of the tongue. There were

five large elevations on the right side and two on the left. The anterior portion was more affected than the posterior. The lower lip and the buccal mucous membrane were studded with similar small purple elevations. When she was born a small purple tumor was noticed underneath the chin. When she was twenty-three years of age a little red speck the size of a pin's head appeared on her left cheek, and was diagnosed as a "spider cancer" by a female quack calling herself a "cancer doctor." She applied a "fire plaster to draw out the cancer," and produced a large sore which did not heal for two months. A scar the size of a quarter of a dollar still remains. Immediately after the sore was made varicose veins appeared on the tongue, the cheeks and the side of the neck. Several physicians thought this treatment caused the varicose condition. It seems more probable that there was a congenital tendency. She has also varicose veins under the pubes and near the anus. At times the veins on her tongue and cheeks will swell up and become quite annoying. Once, twenty years ago, she burned her tongue with a piece of hot meat and opened one of the veins, causing a hemorrhage which was stopped with some difficulty. Twice since then she has spit up blood, coming apparently from the throat, not from the mouth. Aside from these annoyances this condition gives no trouble.

Ergot in Phthisical Hyperidrosis.

A writer in *La Semaine Medicale*, dissatisfied with the results obtained with the means usually employed in phthisical hyperidrosis, conceived the idea of trying ergot in large doses on account of its well known vaso-constrictive action. His success surpassed his expectations. With the large majority of his patients freshly pulverized ergot, administered at bedtime in doses of 5 grams (1¼ drams), completely arrested or at least greatly diminished the sweats. A single such dose did not always suffice, in which case it was repeated in an hour. Some of the author's patients took the stated dose even for fifteen consecutive days without any inconvenience. Only exceptionally was the drug found to be powerless against the night sweats.

Primary Nasal Diphtheria.

Dr. Charles W. Townsend (Boston *Med. and Surg. Journal*) says:

Primary nasal diphtheria may occur of a very mild type. These cases are likely to go unrecognized, for the following reasons:

1. Resemblance to ordinary coryzas, a membrane not being noticed in some cases except by careful scrutiny.

2. The normal or only slightly elevated temperature often present, with but little constitutional disturbance.

3. The intermittent character of the nasal discharge, absent for several days and then starting up again.

4. The apparent recovery, even with cessation of nasal discharge, while Klebs-Loeffler bacilli are still present and capable of transmitting the disease in a fatal form to others.

5. The difficulty of always finding the bacilli in the nose, even when they are present.

Bacteriological examinations in all suspicious cases of nasal discharge should be made.

In primary nasal diphtheria there should be prolonged isolation, together with a refusal to consider a case cured until several consecutive negative cultures have been obtained.

Sodium Nitrite as a Therapeutic Agent.

Gordon Sharp (*Practitioner*) draws the following conclusions from his experience with sodium nitrite:

1. Sodium nitrite, being stable, may replace the less stable amyl and ethyl nitrites.

2. It dilates all the arterioles rapidly and so relieves the heart quickly.

3. Disagreeable symptoms may be overcome by combining it with ammonia water or spirit of chloroform and small doses of morphine.

4. It is most useful in anginal affections and in irregular heart action.

5. To obtain the most benefit from its use it should be continued some time after all symptoms have passed away. By this means the heart is able to regain its tone and so to repair itself.

6. The maximum dose is four, or the most five, grains, and generally one or two are enough.

7. Graves' disease would appear to be aggravated by it.

8. Bronchitis and asthma, in the author's experience, are not benefited by its use.

SURGERY.

Pott's Disease in Children

Pott's disease in children is so often recognized so late in its course that all hope for improvement is futile. The early symptoms and signs which should always be looked for are laid down by Dr. Dillon Brown in the *Archives of Pediatrics* in the following list of different points:

1. The pain, general disability and sickness are out of proportion to the apparent amount of spinal disease.

2. The onset is alarming and the progress of the disease is more rapid than in tubercular caries—the paralysis being an early symptom and the deformity appearing even in a few weeks after the beginning of the symptoms.

3. The local pain is intense; and the peripheral pains, the deformity, the extreme spinal disability and the paralysis, including incontinence of urine and feces rapidly grow worse in spite of rest in bed and instrumental support.

4. Secondary disease soon appears, rapid emaciation and marked cachexia are seen, and the patient does not live more than six or eight months.

Whether a vertebral caries is due to syphilis or to tuberculosis is of immense importance

as regards prognosis and treatment. In both diseases the symptoms are almost identical, and the diagnosis must be based upon the history, the presence or absence of other evidences of syphilis and the result of treatment. In tuberculosis there is more likely to be an evening rise in temperature, and the pus and refuse may contain tubercle bacilli. Syphilis is suggested by nocturnal pains and the involvement with chronic disease of some other joint or joints or some other part of the spine.

Rules for Trephining in Injury of the Skull.

1. All cases of depressed fracture, either simple or compound, require trephining and elevation, whether there be pressure symptoms or not.
2. All punctured fractures and gunshot wounds imperatively indicate the use of the trephine.
3. In simple fracture of the skull where any symptoms of brain trouble persist exploratory operation should be done.
4. In all cases of local injury to the skull, whether fracture or bruise, followed by evidence of inflammation of bone or persistent symptoms of brain irritation, or of pus between the bone and dura, the trephine should be resorted to.
5. In every case of localized injury to the head where unconsciousness persists for more than an hour, exploratory operation, including opening the skull if necessary, should be done.
6. The appearance of stupor some hours after a head injury indicates meningeal hemorrhage and requires trephining at the point of injury if known or at point indicated by cerebral localization, the middle meningeal being the usual source of trouble.
7. Even in very extensive injury to the head operation should be made, since removal of fragments, restoration of normal contour and cleaning of injured tissues can add but little to the danger and may save life.
8. In every case of doubt exploratory operation is justifiable.
9. Compound fractures, with or without apparent depression, demand enlargement of the wound and careful exploration.—*St. Louis Clinique.*

Lumbar Puncture for the Removal of Cerebro-Spinal Fluid.

Dr. William Browning (Boston *Med. and Surg. Jour.*) says:

1. The method is simple, easily practiced and rather attractive.
2. In itself it is usually without danger.
3. By it we certainly can draw off cerebro-spinal fluid.
4. The quantity removed at short sittings has been from one to one and a half ounces in adults.
5. This without doubt represents the amount of free fluid usually present in the lower vertebral canal even when occluded above.
6. In internal hydrocephalus the relief, if any, is but very temporary. In the common form due to tubercular meningitis the result is not worth the trouble, while in the closed or sacculated forms it must rather do harm than good.
7. As a diagnostic means, for example in suspected meningeal hemorrhage, it is valuable. As an index of pressure it may also be worth noting.
8. It is worth further trial (*a*) as a passing relief in brain tumor not complicated by hydrocephalus; (*b*) as a substitute for trephining in progressive dementia; (*c*) in certain spinal troubles; and (*d*) possibly as a means of applying medication directly to the spinal meninges.
9. In conclusion, it may be said that while admissible in all cases of brain-pressure, there is as yet no established indication for this procedure except for diagnostic purposes.

The Treatment of Floating Kidney.

Riedel (Reineboth in *Cent. f. Chirur.*) performed nephrorrhaphy in eight patients. As a result of this experience it was found that sutures made to include the renal structure and surrounding adipose tissue were insufficient for the purpose, and suture of the fibrous capsule alone by means of catgut was subsequently substituted. This, however, only permits of fastening of the lower half of the organ, or that portion which projects below the twelfth rib, and fixation of the upper half must be accomplished by some other method. This is done by splitting the fibrous capsule for its entire length at the posterior edge of the kidney, loosening it from its attachments to the latter as far as possible, and tamponing the space thus formed by means of a strip of iodoform gauze. The gauze is pushed as high up as possible between the exposed renal surface and the diaphragm. The remainder of the wound is also tamponed with iodoform gauze. The strip of gauze is allowed to remain for several weeks, and upon its removal two broad granulating surfaces are to be found lying opposite to each other. These become attached in the further progress of the healing, and the kidney thus becomes secured along its whole posterior border. The results thus far obtained are sufficiently encouraging to warrant further trial of the method.

Diabetes and Surgical Operations.

It is the experience of every surgeon that while operations upon some diabetic patients may be apparently as harmless as operations upon healthy individuals, they are in some cases accompanied by disastrous results. The tissues of diabetics are a particularly favorable soil for the development of bacteria, inflammation and gangrene being often the inevitable result of surgical procedures. If asepsis is a necessity in any operation, no matter how insignificant, it is pre-eminently so in diabetic patients, and gangrene may often be prevented by operating under the strictest aseptic precautions. Antiseptics, on the contrary, are as much as possible to be

avoided on account of their irritating properties. It is of much importance for the surgeon to know in what cases of diabetes it is justifiable to operate and when it is not advisable to undertake an operation, and with regard to this question the observations made by Dr. Reynier, of Berlin, are of much interest. According to the experience of this author, operations are particularly fatal in cases of diabetes in which the reflexes are absent. Of 40 diabetic patients operated upon 15 died, and in 13 of these the reflexes were absent and died of gangrene, lymphangitis and phlegmons of a gangrenous nature. Of the remaining 2 one died of a phlegmonous inflammation which was developed from a panaritium, the other in consequence of a carbuncle which had been treated with sublimate and boric acid. The carbuncle healed, but suddenly sugar disappeared from the patient's urine, albuminuria set in and death occurred from uremia. Reynier differentiates between hereditary diabetes which is characterized by an excessively developed panniculus adiposus, but where the function of the muscles is preserved, and atheromatous diabetes in which the muscles are infiltrated with fat and degenerated. The latter occurs at about an age of fifty, while the former makes its appearance between the twenty-fifth and thirtieth year. There is less danger in operating upon the atheromatous form of diabetes than upon the diabetes due to an infection of the nervous system and pancreas. Gangrenous manifestations appear after operation at any stage of the disease, but the resistance offered by the tissues to an operation or any kind of irritation becomes less and less as the reflexes disappear.—*Med. Review.*

Anesthetics.

Anesthetics have been quite the absorbing topic among English practitioners at times during the past year. Commissions continue to be appointed and bring in unsatisfactory reports, but the whole tendency and purport of the discussion has been very decidedly to elevate ether above chloroform. One of the most recent elaborate reports on this question is that of the commission established by the London *Lancet* to investigate the whole subject of the administration of anesthetics, and Dr. Dudley Buxton draws the following deductions from it:

"1. That the death-rate under anesthetics heretofore has been unduly high, and may, by improved methods and greater care, be lowered.

"2. That ether when properly given from an inhaler, permitting graduation of the strength of the vapor, is the safest anesthetic in temperate climes for general surgery.

"3. That nitrous oxid gas should be employed for minor surgery and should replace chloroform in dental surgery.

"4. That chloroform when given by a carefully trained person is a comparatively safe body, but is not in any case wholly devoid of risk.

"5. That no age or nation is free from danger under anesthetics.

"6. That the perils of anesthetics, however slight, demand that the undivided attention of a duly qualified and trained medical man should be given to the administration of the anesthetic."

Oxalic Acid as a Germicide.

"As is perhaps known," says Dr. Mary Sherwood in the Philadelphia *Polyclinic*, "at the Johns Hopkins Hospital the routine preparation of the surgeons' hands consists in thorough washing, followed by immersion in a solution of potassium permanganate until stained a deep red-brown. To remove the stain they are then placed in a warm saturated solution of oxalic acid. Repeated bacteriological tests have shown that this method is very effective."

A series of experiments by the author to test the relative germicidal powers of the two solutions, however, seems to indicate that the real germicide was the solution of oxalic acid. Using bits of surgeon's silk dipped in cultures of staphylococcus pyogenes, it was found that potassium permanganate in saturated solution did not sterilize them, either at the room temperature or at a temperature of 45° C. (113° F.), by exposure of from one to ten minutes. On the other hand, oxalic acid in saturated solution, at a temperature of 40° to 45° C. (104° to 113° F.), sterilized the infected threads exposed to its action for one minute, showing the oxalic acid to be the more powerful germicide.

THERAPEUTICS.

Sulfonal a Reliable Sleep-Producer.

Authorities are still somewhat divided as to the relative merits of sulfonal and trional, some expressing a preference for the one, some for the other. In a discussion which recently took place before the Therapeutical Society of Paris, and which is reported in the *Medical Week*, Dr. C. Paul summarized his views as follows:

"I have employed both sulfonal and trional, and I prefer the former, which is the best remedy for nervous insomnia unaccompanied by organic lesions. It has no ill-effects, either on the heart or lungs, and is excellent in the treatment of patients suffering from heart disease, but useless for consumptives, inasmuch as it does not prevent coughing. The sleep which it procures is sound and waking is easy and without nausea. I do not think any advantage would be gained by substituting for it either trional or even tetronal."

Dr. Bardet, who participated in the discussion, has also found sulfonal a satisfactory remedy. Dr. Brough (*Jour. Mental Sci.*) suggests the use of this drug as a means of inducing insane patients who refuse food to eat voluntarily. He observed in five cases of severe melancholia, in which the patients had repeatedly and for a long time refused food, that after each administration of sulfonal, which was given as a hypnotic in the

evening, they voluntarily resumed eating. The author desires that others should test the correctness of his observation. Attention to the value of sulfonal in the sleeplessness of neurasthenic persons has recently been directed by Dr. G. H. Savage (*Brit. Med. Jour.*), who regards it as "the least harmful drug," and by Dr. F. S. Thomas (Omaha *Clinic*), who obtained excellent results from its occasional use together with a small opiate in these cases.

GYNECOLOGY.

Rules for the Introduction of Instruments into the Uterus.

Dr. C. S. Bacon (*Amer. Jour. of Obs.*) says:

1. Do not expect to complete the preparation of the patient with less than fifteen minutes of hard work.

2. Never make the examination at the first visit of the patient. Instruct her how to take a vaginal douche, and direct her to use sublimate douches twice a day for three or four days. If immediate examination is required, let it be done at her home or in a hospital with all the preparatory details of a surgical operation.

3. Thoroughly disinfect the external genitals and surrounding skin.

4. Disinfect the hands and instruments, including the irrigating tip, which should be a glass tube.

5. Wash the vagina with a solution of lysol or creolin. In the office I have found Tooker's bed-pan most useful. With two fingers, either with or without sterilized gauze or cotton, thoroughly scrub every part of the vaginal wall.

6. Introduce a Neugebauer speculum, which is better than any form of Cusco's bivalve, for it is asepticizable and better than a cylindrical speculum, as it is much easier to work through.

7. Disinfect the cervical canal by means of a cotton swab, using first the liquid soap, then a strong creolin solution, and finally alcohol. Never introduce an instrument without seeing the cervical canal.

I believe that the carrying out of these rules will present all except post-partum, post-abortum and gonorrheal endometritis and salpingitis.

Early Diagnosis of Cancer of the Cervix Uteri.

Dr. Ernest Herman (*Brit. Med. Jour.*) says that as secondary growths occur later and less frequently in the uterus than in any other part of the body, the early recognition and removal of the diseased area is of the utmost importance The readiness with which the vaginal portion of the cervix may be examined makes it possible to detect diseases early and to gain successful results from treatment. The early diagnosis of cancer is so important that we are justified in making an unusual hemorrhage or discharge in a woman who has borne children a reason for a vaginal examination. The use of the microscope in establishing a diagnosis of cancer has decided limitations, and while it will occasionally reveal cancer in doubtful cases, negative evidence of cancer by microscopical examination should not be relied upon, and an opinion had better rest upon the local and general symptoms. As a rule, the first signs of cancer are hemorrhage and leucorrhœa; pain and loss of flesh come later. Cancer that begins as an outgrowth from the surface of the cervix resembles a growth of warts, papillæ or granulations, and the surface feels uneven or rough. The disease may start as an ingrowth beneath the surface. It may be detected by an angry, livid, red spot, the surface of which is at first quite smooth. This angry color depends upon the vascularity caused by the new growth and upon its tendency to break down, which leads to minute hemorrhages into the growth before the breaking down is extensive enough to make a breach of the surface. The livid surface of a cancer spot bleeds on being rubbed, so that a smooth, dark-red spot, bleeding on contact, is very suspicious. This is the earliest stage of cancer, and if a nodule can be felt the suspicion is stronger. When the cancer has advanced to a cauliflower-like growth the diagnosis is quite certain.

Gangrene of Vagina from Iron Applications.

The danger of making (*New York Med. Jour.*) applications of preparations of iron to mucous membrane of the vagina in the attempt to check uterine hemorrhage is pointed out by Dr. Charles E. Nammack, of Gouverneur Hospital, New York. He cites the case of an out-patient who applied for help at the clinic suffering from extensive gangrene of the vagina. She had been treated two days before by a practitioner who had then inserted a tampon of cotton soaked in tincture of chloride of iron. She was found to be markedly anemic, with rapid feeble pulse and temperature between 100° and 104° with chills. Locally the whole vaginal mucous membrane, including that of the vaginal portion of the uterus, was covered with thick blackish sloughs. Douches and boro-glyceride tampons were used and the dead tissue removed as quickly as possible. The underlying granulating surface was dusted with iodoform and the vagina packed with iodoform gauze. Later the use of the glass plug will be necessary to prevent stenosis.

Garrigues ("Diseases of Women," 1894, p. 343) refers to a case where a tampon soaked in medicated liquor ferri chloridi produced an exactly similar condition to that found in this patient.

R. A. Murray, at the meeting of the Section of Obstetrics and Gynecology, New York Academy of Medicine, reported having known undiluted persulphate of iron to cause cicatrices in the vagina, and advances this as a possible cause of atresia in the vagina in some cases.

OBSTETRICS.

Treatment of Vomiting of Pregnancy.

Lutaud (*Revue Obstet. et Gyn.*) states that vomiting of pregnancy is best treated by cocaine. The action of this drug is often strengthened by combining it with antipyrin. Thus the following prescription:

Chlorohydrate of cocaine.....	grs. iss
Antipyrin	grs. xvj
Distilled water.....	℥ iv

Sig.: One teaspoonful every half-hour until vomiting ceases.

If the stomach will not tolerate this quantity of liquid, ten drops of a one and a half or two per cent. solution of cocaine are administered, repeated at one or two hour intervals.

At times the application of cocaine to the os is extremely valuable. The following prescription may be used:

Hydrochlorate of cocaine.....	grs. xvj
Extract of belladonna.....	grs iv
Vaseline.....	℥ ss

Cotin's method of dilating the os with the finger sometimes causes immediate cessation of vomiting. Occasional success will follow Routh's procedure, which consists in exposing the uterine neck ny means of a speculum and painting with tincture of iodine. In cases of moderate severity the following mixture will be found serviceable:

Tincture of iodine.....	℥ ij
Chloroform	℥ ij

Sig : Five drops night and morning at meal-times, taken in Seltzer water.

Care of the Navel in the New-Born.

Schrader discusses this subject in a paper which was read before the Obstetrical Society at Hamburg (*Cent. f. Gynak.*). He says the question as to the best treatment of the stump of the navel cord probably seems to many unimportant, because the frequency and danger of infection through the navel wound are not appreciated. Unfortunately we do not yet possess sufficient statistics on the subject. Recently, however, Ehrendorfer has published a large and very valuable collection of cases bearing upon this point, from the obstetric clinic at Innsbruck. Of 1,764 children born there, 95 died; and on 81 of these an autopsy was made. Infection of the navel was demonstrated in 16—therefore in 16.48 per cent. of all that died, or in about 1 per cent. of all the children under observation. Probably even this percentage is too small if all the facts were known. Ehrendorfer rightly brings out that without an exact autopsy the cause of death in the new-born is frequently overlooked, especially since the illness due to infection very often is complicated by pneumonia, icterus, gastro-intestinal catarrh, etc., and these sequelæ, unless an autopsy is made, are assigned as the cause of death. It is probable, therefore, that a much higher percentage of the new-born die of infection through the navel than is now believed. To prevent this Ehrendorfer recommends strict asepsis at the time of severing the cord and afterward, and that the effort be made to secure rapid and complete mummification of the stump. This latter is to be attained, first, by thorough protection of the stump from moisture, and, second, by its exposure, so far as possible, to the air. To avoid moisture Schrader advises that bathing of the infant, except for the cleansing immediately after birth, be entirely dispensed with until the stump has fallen off and the navel has healed. It is not so easy to permit free access of air, but to attain this as far as possible the stump should be wrapped in a piece of linen or mull, dry, not oiled. Eross found in his observations and experiments on nearly a thousand infants in the clinic at Budapest that a dry linen cloth is better for the stump than one oiled. This first dry dressing is usually not changed. The band is not to be too firmly applied, and should be frequently raised to allow access of dry air. If the stump does not do well in this simple way, as is apt to happen with a large amount of Wharton's jelly, Schrader powders it well with dermatol; and after falling off of the cord the navel wound is kept powdered with dermatol for several days.

In the discussion that followed this paper Windmuller said he dresses the navel cord with dry charpie, using powdered boracic acid if there is a bad odor, but only the charpie again after the odor disappears.

Aly had had good results by dressing with a powder of alum and boracic acid; equally useful is powdered sugar.

Lomer also employed powdered sugar, and had never seen a bad result in 500 cases.

Hotte was opposed to omitting the daily bath, because it was in every way beneficial to the new born.

In reply, Schrader did not consider the bath so necessary that it could not be omitted for the first eight or ten days without disadvantage. Infants, he found, got along as well without it, and in fact less often developed snuffles.

Early Signs of Pregnancy.

It has long been taught that the diagnosis of pregnancy in the first three months is very difficult or even impossible. This Dr. Charles P. Noble contradicts in the Philadelphia *Polyclinic*. In his experience careful abdominal palpation will make it out as early as the sixth week or at any time between the sixth and twelfth weeks. This sign, he says, has never failed him in his dispensary work, but almost all of these cases came in to see if pregnancy existed, and as they were illegitimately pregnant it was possibly rather an easy guess. The shape of the virgin uterus is pyriform, while a uterus in which there is an ovum but a few weeks old will have grown sufficiently to cause the body and fundus of the uterus to assume a spheroidal shape.

The conditions which he found to simulate pregnancy were hematometra, which is very rare and usually occurs at the time of puberty; and intramural fibroid tumors, which

on account of the asymmetrical shape given to the uterus may be left out of the question. When pregnancy occurs in a uterus where there is already a fibroid or if the uterus be jammed between tumors of the ovary, then the diagnosis is very difficult, and when the patient is very stout palpation is not easy. Still, in general, he thinks a pregnancy can be told with certainty in the first twelve weeks, and he emphatically makes this statement in view of his large experience.

Expulsion by "Quilling."

A correspondent sends the following, for the truth of which he vouches: A young doctor who began his practice in Texas, west of Houston, was called to a confinement case in which he, being green and nervous, naturally had some trouble, the patient seeming unable to make the supreme effort for final expulsion. The only other occupant of the wretched quarters was an old crone in a sunbonnet, who was silently but steadily rocking herself near the foot of the bed. Finally the old woman croaked out: "Doc, I wouldn't bother any longer with that woman. I believe I'd quill her and have done with it." The medical man, not knowing what quilling meant, answered that he did not quite see the necessity for that yet. The old woman repeated this suggestion several times, until finally the nervous, exasperated man turned angrily on her and said: "Madam, I'll be d—d if I will do it. If you want to quill her you can do so, but I won't." The crone took from the wall a turkey wing, and drawing a feather from it proceeded to fashion something like a long quill toothpick, and filling this with snuff from her own private stock leaned over the patient, and as the next pain came blew the snuff into the woman's nostrils. Quick as a flash the woman responded with a giant sneeze, and the child was born with the sneeze. "Thar," said the old woman radiantly, "I knowed mighty w that thar bust would make her break her holt." And it did, to the great instruction of the attending physician.—*Med. Rec.*

PHYSIOLOGY.

The Physiology of the Spleen.

Volpius (*Beitrage zur klin. Chirurgie*) has arrived at the following general conclusions concerning the physiology of the spleen:

1. Histological study of the normal splenic tissue shows the possibility, but not the certainty, of the entrance of colorless cells in the circulation from the spleen. It is evident that the red cells undergo disintegration in the spleen, but there is no ground for assuming that they are formed in the spleen.
2. Comparison of the blood of the splenic artery and vein shows no positive difference.
3. In acute general anæmia the spleen shows signs of increased activity.
4. Removal of the spleen causes a transient decrease in the number of red and an increase in the number of white blood cells.
5. The thyroid gland has no vicarious relation to the spleen.
6. The lymph nodules and the bone marrow acquire an increased blood-forming activity after extirpation of the spleen.
7. The regeneration of blood is retarded after hemorrhage in persons without spleen.

These conclusions, though contradicting certain accepted teaching, offer little that is new, but are of value in that they are based upon accurate scientific data and corroborate much that has already been done. Unfortunately, our knowledge of the physiology of the spleen is still left in a state of confusion.

The Treatment of Abortion.

G. Wyeth Cook (*Am. Jour. Obs.*) says that while the subject is a commonplace one, he considers it one of the greatest importance to the general practitioner. It is generally conceded that everything should be done to prevent a threatened miscarriage. If this is impossible, it becomes necessary to completely evacuate the uterus as quickly as possible. When there is considerable hemorrhage the tampon should be used. This is best accomplished by inserting some iodoform gauze in the cervix and then packing the vagina with long strips of sterilized gauze. Should not the whole uterine contents be expelled when the tampon is removed, the writer advocates strongly the radical method of treatment, the immediate removal of the uterine contents by means of the finger introduced into the uterus, or the curette, under the strictest antiseptic precautions. Neglected miscarriages are the most fruitful sources of pelvic diseases.

In removing the secundines the finger is the best instrument to employ. If the cervix is not sufficiently patulous to admit of easy entrance of the finger or curette, the necessary dilatation may be produced by means of a dilator or laminaria tents. Failure to remove the entire uterine contents allows a festering hot-bed of infection to remain within an organ which is ever ready to absorb the products of such decomposition.

In conclusion, the writer states that many of the cases of abortion seen by him have been criminal in their origin, and he asks: What is the duty of the physician to the State in matters of this sort? I believe it to be the moral duty of the physician to preserve inviolate facts that he may have learned in his capacity as physician. Yet criminal abortion is a crying evil, and the law does not excuse the doctor from revealing what he may have learned in his capacity of physician, notwithstanding the information he may have was communicated only because it was necessary to an intelligent understanding of the case. And should a woman die from the effects of a procured abortion, should the physician so state or should he falsify the death certificate? There can be no doubt as to his duty in this last case. But the woman surviving, I am not so sure as to the course he should pursue, because of the apparent difficulties in legally establishing the facts.

PATHOLOGY.

Biting the Nails.

Dr. Berillon, as the result of an extensive inquiry, confirms his previously expressed opinion that onychophagia and similar habits are generally associated with degeneracy. The frequency of onychophagia varies greatly in different institutions. In some, 2 or 3 out of every 10 children are addicted to biting their nails. A careful examination invariably reveals signs of degeneracy. The children are usually less healthy in appearance than others, presenting deformities of the skull and anomalies of the teeth and ears. In such subjects the teachers notice a marked antipathy to physical exercises and games requiring effort. They write poorly and show marked inferiority in respect to manual dexterity. They are slow to learn; they are incapable of continuous application; in fact, they always exhibit an inferiority in some direction or other. The disciplinary measures usually resorted to to correct bad habits are powerless in this; in the majority of cases only hypnotic suggestion seems to be capable of effecting a cure. The habit of biting the nails sometimes persists until late in life.—*Med. Fortnightly.*

Contribution to the Study of the Etiology of Varicocele.

B. S. Talmey, M.D. (*Amer. Medico Surg. Bull*), is quoted as saying that masturbation is almost always the pathological cause for varicocele. There can scarcely be a greater unnatural irritation of the nerves than that caused by onanism. During such an irritation the testicles being in a secretory condition are supplied with a greater amount of blood, and anything that increases the amount of blood to the testicles is surely a cause for varicocele. Through the continued high pressure the walls of the vein become lax, flabby and unresisting and the vessels enormously dilated. The elastic and contractile tissue of the venous walls is absorbed and replaced by a low grade of connective or fibrous connective tissue. The same condition as in the spermatic cord in the male is found in the broad ligaments, as the ovarian veins in the female are the analogue of the spermatic veins in the male. That varicocele is frequently formed in women after pregnancies is agreed by most writers on this subject. But the author does not remember having read about a case of varicocele in a virgin such as he once saw in a girl, whom he immediately suspected of masturbation. The sexual organs were all in a normal condition, and yet she complained of a dragging sensation along Poupart's ligament and in the vagina. The broad ligaments were thickened.

BACTERIOLOGY.

Vitality of the Typhoid Bacillus.

According to Uffelmann (*Cent. f. Bakt.*) typhoid bacilli resist drying for a long time. From his investigations he concludes that these micro-organisms retain their vitality in a dry state for many days—in ordinary earth, 21 days; in street-sweepings, 30 days or more; in sand, 82 days; on wood, 32 days; and on linen over 60 days. In moist media it is very probable that the microbes would retain their power of growth still longer. The same investigator proves that typhoid bacilli may be carried by the air as well as by the clothing, and that they are thus capable of infecting milk, water and various foodstuffs.

Uffelmann's mode of distinguishing the typhoid bacillus may be briefly stated as follows: In the microscopical examination low powers, not exceeding 100 diameters, are employed. A careful note is taken of the movements of the microbes and the shape of the colonies as compared with typical colonies. The fact that typhoid bacilli do not induce fermentation in 2 per cent. lactose gelatin is also utilized, together with the characteristic growth upon methyl violet gelatin.

NEUROLOGY.

The Cause and Premonitory Symptoms of Cerebral Hemorrhage.

Dr. C. L. Dana (*Boston Med. and Surg. Jour.*) reports 100 consecutive cases of apoplexy with hemiplegia observed at his clinic at the Post-Graduate Hospital and 79 cases of apoplexy with autopsy observed in Bellevue Hospital. Thirty of the latter came under his personal care and observation.

Of 100 non-fatal cases 36 were due to syphilis. The special characteristics of the cases due to syphilis are that they occur in early life, that they are often multiple in character, and that the pathological condition underlying them is usually a thrombosis and softening.

So far as his experience and records went, cerebral hemorrhages are rarely repeated, and it seemed as if in many cases the rupture of an artery changed the vital conditions, as it certainly does the personal habits, so that the attack exercised a conservative influence upon the individual and actually tended to prolong life.

BOOK REVIEWS.

Lippincott's Magazine for January, 1895.

The complete novel in the January issue of *Lippincott's* is "The Waifs of Fighting Rocks," by Captain Charles McIlvaine. The scene is laid in the mountains of West Virginia, and the tale is one of adventure, love and jealousy among the mountaineers.

"By Telephone," a stirring newspaper story by Francis C. Regal, shows how a plucky reporter defeated a conspiracy and brought the criminals to justice. "A Question of Responsibility," by Imogen Clark, deals with delicacy *vs.* life-saving in a lodging house.

The other stories belong to Christmas, and are offered at the right time instead of a

month beforehand, as is the usual magazine custom. These are "Mrs. Santa Claus," by Marjorie Richardson, "A Prodigal Friend," by S. Elgar Benet, and "Mrs. Risley's Christmas Dinner," by Ella Higginson. Each of them is in the spirit of the season, though the last is in a minor key.

"Christmas Customs and Superstitions" are collected by Elizabeth Ferguson Seat. Edgar Fawcett recalls "New Year's Days in Old New York," and Edith Duff "Empress Josephine's Happy Day," ninety years ago.

In "The Ducks of the Chesapeake" Calvin Dill Wilson tells all about the canvas-back before he is shot and after. Gilbert Parker offers a study of "Herbert Beerbohm Tree," the actor. F. M. B., in "With the Autocrat," recalls some notable private utterances of Dr. Holmes, and M. Kaufmann discusses "Socialist Novels."

The poetry of the number is by M. S. Paden, Alice Brown, Kathleen R. Wheeler and Susie M. Best.

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM JANUARY 6, 1895, TO JANUARY 12, 1895.

The leave of absence for seven days granted Captain Reuben L. Robertson, Assistant Surgeon, is extended twenty-one days.

The leave of absence granted First Lieutenant Charles Lynch, Assistant Surgeon, is extended one month.

First Lieutenant George D. De Shon, Assistant Surgeon, will proceed from Fort Logan, Colorado, to Fort Douglas, Utah, and report for temporary duty.

Ordinary leave of absence for one month and fourteen days, in addition to the extension of leave of absence on surgeon's certificate of disability granted him, is granted Captain Adrian S. Polhemus, Assistant Surgeon.

Leave of absence for three months on surgeon's certificate of disability is granted Captain Wm. C. Shannon, Assistant Surgeon.

Leave of absence for one month is granted First Lieutenant Henry C. Fisher, Assistant Surgeon.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE FIFTEEN DAYS ENDING JANUARY 15, 1895.

Carter, H. R., Surgeon; to assume temporary command of Cape Charles Quarantine, January 7, 1895; relieved from such duty, January 14, 1895.

Perry, T. B., Past Assistant Surgeon; to proceed to Delaware Breakwater Quarantine Station for temporary duty and to rejoin station (Cape Charles Quarantine) upon completion of same, January 14, 1895.

Wertenbaker, Past Assistant Surgeon; granted leave of absence for seven days, January 3, 1895.

NEWS AND MISCELLANY.

Pennsylvania State Medical Society.

The members of the Medical Society of the State of Pennsylvania who wish to read papers at the meeting to be held at Chambersburg May 21 to 24, 1895, will please send their names and the titles of the papers they wish to read to the chairman of the Committee on Scientific Business, Dr. Charles W. Dulles, 4101 Walnut Street, West Philadelphia.

The committee desires papers to be absolutely no longer than ten minutes.

At the last meeting a large number of interesting papers were not read because those preceding them were too long, and it is to be hoped that those who prepare papers for the coming meeting will condense them as much as possible. The laws of the society permit each writer to occupy twenty minutes, but it will be of advantage if the members of the society do not avail themselves of all their privilege.

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ORIGINAL ARTICLES.

THE PRETUBERCULAR AND PREBACILLARY STAGES OF CONSUMPTION.

CHARLES MANLY, A.M., M.D., Denver, Col.

The steady decrease in the mortality from consumption during the years of the decade just passed is attributable not so much to improved methods of treatment as to a better knowledge of the disease itself and the measures which have been put forth toward its prevention. The importance of an early diagnosis in such cases as must arise is apparent.

In attempting a paper under the difficult title of "Pretubercular and Prebacillary Stages," I will not arouse unnecessary antagonisms or limit the freedom of preconceived opinions by essaying to state just what part the bacillus plays in this degenerative process. The pathological enthusiasm aroused by the discovery of Koch's bacillus should not blind us to the fact that there are other elements than the bacillus and the changes which by its presence are wrought in the tissues and fluids where it domiciles. There are other elements, I say, necessary to the production of this disease.

The bacillus is ubiquitous, yet only a part of the human race falls victim to its ravages. The individual equation is the necessary factor. Some individual weakness is necessary to be added to the bacillus. This weakness may be inherited or acquired. The question of hereditary influences has already been ably considered by Dr. Ruedi. Many persons with inherited tendencies escape the disease, even after prolonged exposure, until some impairment of the general health opens the door to the invasion of infecting bacilli. Certain inherent conditions, I believe, followed by certain incipient stages constituting a negative intoxication (recognizable), precede the developed symptoms of established phthisis, just as a stage of intoxication precedes the lethal symptoms of a large dose of opium.

There is something in the physique of these individuals necessary to the production of phthisis—something preceding bacillary infection—something which realizes the fact of that infection and makes it possible, and a something which, being the "personal equation," determines the course, character and effect of such infection. This condition of health I have dared to call "the pretubercular stage." It has been variously described in the past as, by Dr. Rokitansky, "the phthisical habitus;" by others as the "tuberculous predisposition," "susceptibility," "favorable soil," "lack of resisting power," "tubercular diathesis," "good culture medium." There are still other forms of expressing this same condition of ill health. "That condition which makes the human tissues a receptive soil—a favorable culture

medium for the tubercle bacillus—that condition which of old was called 'diathesis' and now 'susceptibility,' is itself a disease—a departure from the *normal*—and I believe it to be the most important element in the morbid complexus termed tuberculosis. It is the element requiring the greatest care in prophylaxis—the most intelligent and faithful treatment." *

But what do these terms mean? Metschnikoff attempted to show that it is all summed up in a lack of leucocytes to destroy the elements of contagion—a weakness in the microbe-killing activity of these blood scavengers. Others claim that "susceptibility" consists of a want of certain bio-chemical constituents of the tissues, fluids and blood plasma. A generally embryonal condition of the connective tissues—abridgment of the lymph spaces and increase in the solids of blood. Dr. Cutler advances the theory of "acid dyspepsia"—an acetic-acid fermentation resulting in a yeasty condition of the blood. Others admit that "inherent weakness" is modified tuberculosis, the bacillus being transmitted with the ovum, lying dormant for years and held in abeyance awaiting a favorable opportunity to develop. Such opportunity is afforded when the surrounding tissues are enfeebled, either by an injury or by some "critical period" of life, when it develops into genuine tuberculosis.

These definitions and theories as to the pretubercular stage are inadequate. We seek, therefore, to overcome the difficulty by defining the condition as one of impaired or defective nutrition.

In tuberculosis generally the first symptom is loss of weight. This is usually the most prominent symptom and one which is directly proportionate to the progress or severity of the disease. Nutrition is defective in quantity, leading to atrophy and wasting; it is altered in quality, causing deterioration and softening of the tissues.

The diagnosis of this condition is most difficult. Incipient tuberculosis, simulating as it does almost every other disease, is not easily distinguished, especially from typhoid fever. It is often mistaken for gastric disturbance or rectal stricture.

The changes in the lungs themselves may be small or great, but they are generally confined to the periphery, where it is not noticeable; or, where the bronchial tubes are concerned, a mistaken diagnosis of bronchitis is made. But as in the first and second stages the disease is so thoroughly masked at times as to awaken no suspicion, so in the prebacillary stage the same condition obtains, and the diagnosis should be made objectively. The rational signs are of great weight.

After catarrhal pneumonia, or "la grippe," or concomitant with a chronic irritation due to foreign substances inhaled incidental to an occupation like cigar-making or coal-mining or any sort of mill work, we find a condition aptly described as "chronic inflammation," and vulgarly known as "phthisic," "winter cough," etc. We know the change in the pulmonary tissues consists as follows: "Cells, the product of inflammation, accumulate in the alveoli and bronchi and crowd upon each other, becoming densely packed, and thus by mutual pressure are destroyed and cause at the same time decay or injury to lung tissue."

Such conditions we know present but little auscultatory information, but auscultation is not diagnosis. As an eminent authority has expressed it, "I esteem rational symptoms as of greater weight than those signs eliminated by auscultation."

Associated with progressive loss of weight, nutrition suffers from a loss of appetite and the well-known languor which precedes typhoid fever. Patients have often said to me, "I feel exhausted when I awake. A few hours in the early morning I feel stronger, at eleven o'clock exhausted again, and the same at four in the afternoon." One cannot claim that such a statement of symptoms is pathognomonic of any particular disease, but I do say it is *especially true of phthisis*.

Perhaps in no class of cases is the element of lassitude so marked and so diagnostic as in children, who, though they may not be the offspring of tuberculous ancestry, may have the so-called predisposition stamped upon them in belonging to a large family of children born of a mother whose periods of lactation lapped over the periods of pregnancy four or five months each year.

The physician who fails to diagnose the pretubercular stage with incipiency in such a child at any time when loss of

*S. Solis Cohen.

weight and appetite and languor are the symptoms, or when the child has a chronic cough incidental to measles or pertussis, commits a double wrong—to the physician's judgment and to the patient's confidence.

It may not be amiss to remark again upon the importance of careful diagnosis in these cases of measles and whooping-cough. When measles exhibit a decided tendency to pulmonary inflammation, the distance to phthisis is not great. The respiratory murmurs may never return to normal clearness. Associated with the frequent relapses into bronchial troubles, we find induration and caseation with diminished expansion. This is evidenced by a short but easy cough, rapid respiration without evident dyspnœa. This, however, is not the time nor the occasion for a description of the tuberculous child.

I will not attempt to discuss at length the histology or pathology of this condition of ill health. Nor will I take up the subject of treatment, which is practically that of phthisis itself and will be discussed in a succeeding paper. I pass at once to my conclusions:

That there is a pretubercular stage.

That it is something more than mere predisposition or susceptibility.

That it is a mitigated form of consumption.

That it is either hereditary or acquired.

That, other things being equal, continued loss of weight is suspicious of oncoming tuberculosis.

That the keynote of this condition is impaired nutrition.

I deprecate the preponderating importance given to the bacillus, whereas this condition of health occupies the position of a primary etiological factor to which the bacillus is secondary in importance.

I deprecate the supercilious superficiality with which many physicians veil the seriousness of this condition under the name of "bronchitis."

SCIATICA (?)—MANIA A POTU—PLEURITIS WITH EFFUSION OCCURRING IN PHTHISIS—TUBERCULAR OR SYPHILITIC LARYNGITIS.*

CHARLES CARY, M.D., BUFFALO, N. Y.

This patient exhibits an interesting and puzzling condition, and I present him, not to illustrate a well-marked and logically treated clinical type, but for the sake of some valuable hints which may be of help in practice.

The patient is Irish; aged forty-five; single; twenty years in this country. His family history has no bearing on the case except perhaps that one brother died of Bright's disease at fifty. Six years ago he had a chancre, which was followed after five months by a general cutaneous eruption lasting eight months. At this time he had pain in the left hip, running to the knee, and several similar attacks have followed at irregular intervals. On entering the hospital twelve days ago he complained of pain and tenderness in the popliteal space, inability to extend the thigh, and the left leg was somewhat atrophied. He has always been a drinking man and has occasionally gone on a spree.

The pain and the immobility of the hip were so marked yesterday that I asked Dr. Park to see the patient, to determine if there was anything in the way of an actual lesion of the joint. No positive signs of a surgical condition of the joint were found, though it seemed to me from the way in which he held the thigh that there might be some effusion. The temperature at no time has reached 99°, which enables us to exclude any high grade of inflammation, rheumatic, septic, etc.

At this time and for some days previously the patient would swing the entire trunk rather than let us move the hip joint, which was held rigidly in a state of semi-extension. Having made a probable exclusion of disease in the joint itself, we

*Clinical lecture at Buffalo General Hospital.

looked further for an explanation of his symptoms. Midway between the tuberosity of the ischium and the trochanter major the slightest pressure caused great agony. This suggested sciatica, but today the signs are contradictory, though I believe that the symptoms manifested by the patient have been perfectly genuine. I can now move the leg and thigh quite freely without causing pain. I can extend the knee and flex the thigh—in fact, the patient is more comfortable with the thigh moderately flexed toward the abdomen than in the ordinary position while sitting. Yet this is the position in which the sciatic nerve is stretched, and if there were sciatica we should expect more comfort from relaxing the nerve than from extending it. The best non-operative means of stretching the sciatic nerve is to raise the thigh as I am doing now, but to a higher level. It seems to me that there is no atrophy of the limb, nor do I detect any loss of muscular tone.

Although there was a pretty clear history of syphilis, I did not care to put the patient upon specific treatment till more positive manifestations occurred. He was given Rochelle salts every morning, was kept in bed and counter-irritation was made over the hip. For the first five or six days he made no improvement. Then bitartrate of potassium was given in small doses (1. gm. t.i.d.). Under this treatment, though I do not pretend to say due to it, he has improved. In this treatment we were influenced by the fact that the urine contained albumin and granular casts. The albumin has diminished in quantity and there is no evidence of general dropsy. The patient has had prolonged antisyphilitic treatment in the past, and he lacks a very characteristic symptom of the joint pains of syphilis, namely, that the pain is not greater at night.

I would like to correct a notion that one might naturally form from hospital studies and from remarks often made as to the frequency of syphilis. If your practice is among the better classes of the community you will not meet with more than a few new cases of this disease in a year, although the cases that you do have will last a long time, so that you will practically always have them with you. The disease pervades all ranks of society, sparing neither prince nor pauper, but it is in the improvident class from which hospital wards are recruited that syphilis is particularly rife.

MANIA A POTU.

This patient entered the hospital suffering from acute alcoholism. He later became delirious and unmanageable and passed through quite a long course of delirium tremens. Once he was almost recovered, but about ten days ago he had a relapse. While he has again recovered from the active delirium, he is in an excited state which I think calls for treatment in an insane asylum. He is gentle, but he labors under delusions, and you have noted that he has twice attempted to climb the stairs leading up into the amphitheater. He keeps asking me about things which I have never said to him, and he often speaks to people who are not present.

In the majority of cases of insanity it is not easy to fix absolutely the cause, but here alcoholism is plainly responsible. Alcohol may bring about actual physical lesions in the brain or its membranes, especially in the way of pachymeningitis, or the disturbance may be functional. This patient has shown no signs of an inflammatory process. His temperature has been normal. I do not believe that he is in the first stage of paresis, but think that he will recover from what will, I hope, be a lesson to him not to repeat his previous experiments with alcohol.

Such cases often resemble those of locomotor ataxia, but in this instance there is no difficulty in the differential diagnosis. The gait is not very uncertain, the patient can stand and walk with his eyes shut, and his reflexes are not lost. His general condition is good and the prognosis is therefore favorable.

PLEURITIS WITH EFFUSION OCCURRING IN PHTHISIS.

This patient entered the hospital nearly seven weeks ago with a very abundant pleuritic effusion in the right chest. She is thirty-six years of age, a housewife, of native birth. Her father is alive and well; her mother died of consumption at thirty-eight years of age. Of two brothers and three sisters, a brother died of consumption and a sister of erysipelas. The patient herself was healthy till two

years ago, when she had an attack of grippe. She has never recovered perfectly, has lost thirty pounds and has coughed and expectorated frothy sputum. She has been troubled with night-sweats, chilliness in the morning and feverishness later in the day. Her appetite has been poor and her bowels constipated.

On entering the hospital her pulse was 120, weak and soft; her temperature 100° F. The physical signs were as follows: Right lung anteriorly, sibilant breathing and subcrepitant râles, friction sound below and to the left of the nipple, bronchovesicular breathing; posteriorly, right lung, tubular breathing and flatness. The fluid on the right side accumulated very rapidly until there was marked flatness and the respiratory murmur had almost disappeared on that side. The friction of course disappeared with the separation of the pleural surfaces by the fluid. The patient has since gained in weight to 108 pounds at the present time. The fluid has disappeared and respiration has been restored over the base of the lung, but the physical signs have changed at the apex.

On percussion, at the right apex when the lungs are filled with air there is a peculiar note. The air is driven out through the nostrils, giving a nasal quality to the crack-pot sound. On auscultation I hear loud, cavernous breathing, with the same metallic quality when she breathes through the mouth. It is accompanied by râles, which have increased very much since the last examination. At the base of the lung matters have very much improved. The lung is resonant and the breathing fairly good. The temperature chart is significant. The morning temperature is about 97°, the evening temperature 2° higher, with a maximum of 102.5°.

The question was raised as to the advisability of withdrawing the fluid. On account of family history, her mother and sister having died of tuberculosis at about her age, I did not want to run any risk of perforating the lung and allowing the exit of tuberculous matter into the pleura. There were certainly areas of consolidation, and with the tubular breathing heard at some points and absent at others, it seemed that there were adhesions at some places and effusion separating the lung and chest wall at others. There is no better culture medium for tubercle bacilli in the body than the peritoneum, and the pleura is almost as good.

Whether my fears as to the immediate danger of puncture were well grounded or not, the condition has cleared up without operative interference. At the same time, with the past history and the present condition of the lung itself, the outlook is unfavorable.

TUBERCULAR OR SYPHILITIC LARYNGITIS.

This patient is thirty-eight years of age; a Norwegian lumberman; married. His father died at the age of seventy-three, his mother at the age of eighty-two, of unknown causes. He has two brothers living and well. He came to this country twelve years ago. He has been healthy till two years ago, when he took cold and was in bed three days with pains in the ears and throat. Since then he has suffered with sore throat, and last June his throat began to pain him more severely, especially on swallowing. Three weeks ago (about January 1st) he became too weak to continue at work, being unable to swallow enough solid food for proper nourishment. He smokes considerably, but is temperate in the use of alcoholic beverages and denies venereal history. The tongue is coated; the bowels constipated. The urine on admission had a specific gravity of 1020, was dark red, of urinous odor and acid reaction and contained neither albumin nor sugar. His voice has become more and more husky and, finally, his breathing has become obstructed. He has improved somewhat, he says, since he has been in the hospital.

There has been some doubt as to the diagnosis. Several who have made laryngoscopic examinations have diagnosed syphilitic laryngitis, while I have rather held the trouble to be tuberculous, although differing with those more expert in diseases of the throat. It seemed to me that the man had a bad-looking chest, an examination of the lung revealed areas of impaired respiration and dullness, and Dr. Benedict examined some of the sputum and found tubercle bacilli present. Still, we cannot depend entirely on finding tubercle bacilli in a hospital patient's sputum. In two or three cases in which we have been surprised to find them present it has turned

out that some one else had used the patient's sputum cup. If the case is one of syphilis, as Drs. Cott, Rochester and Hinkel have all decided from the appearance of the larynx, I am firmly convinced that it has been accidentally acquired, for the patient seems perfectly straightforward in his denials of infection. We can elicit no history of an eruption nor find the evidence of a primary lesion. His habits of life have not been wanton, and he does not give a single sign of syphilitic disease except in the throat. The epiglottis is inflamed, the false vocal bands are engorged and the cavity is filled in with granular matter, showing that an extensive ulcerative process is going on. The man has improved somewhat on antisyphilitic treatment, but we should expect the alteratives to have a favorable influence on such a grade of inflammation even if not specific. It is possible that we have to deal with a mixed syphilitic and tubercular infection.

The laryngeal breathing is so loud that it is transmittted to the lungs and might mislead one into thinking the lungs more diseased than is the case. Laryngeal breathing is a loud, tubular sound with a high, whistling character. The respiratory sounds are exaggerated on the left side, and in each interscapular region I have marked an area of loud breathing. In the axillary regions the breathing is diminished. On heavy percussion in the left infraclavicular region, while the patient breathes deeply, I can elicit a crackpot sound—that is, I can expel the air through the larynx by the blow of the finger. I do not believe, however, that this sign indicates a cavity in every instance. I find the loud subcrepitant râle which is to be expected in any case in which the lung is breaking down. The tubular quality of respiration is due, I have no doubt, to the laryngeal disease. It is not surprising if this sound can be heard on the back row of seats that it should be transmitted to the lungs. The râles, I am confident, are formed in the air-passages under the stethoscope, yet I would not be willing to book them as positive signs of tubercular disease. It may be that the patient originally had syphilis of the larynx and that tuberculosis developed later. The temperature range is from 98° to 101.5°, which favors the latter diagnosis.

EXERCISE, REST AND FOOD IN THE TREATMENT OF PULMONARY CONSUMPTION.*

WM. H. BURR, M.D., WILMINGTON, DEL.

The interesting papers on "Rest Cure in Pulmonary Consumption," by Thomas J. Mays, M.D., appearing in THE MEDICAL AND SURGICAL REPORTER June 17, 1893, and "The Management of the Convalescent Stage of Phthisis," in the October number of the *American Medico-Surgical Bulletin*, are accountable for the following, which embodies partly my experience and partly my theory in the treatment of the same subject. And it is from the exercise side of the subject that I wish to say the most.

It is notable in the treatment of any subject in medicine how great a tendency there is to attempt to generalize or reduce to a system the treatment of certain diseased conditions belonging to it. This is perfectly natural, and is only the result of the desire for that order and system which, when carried out in other branches of science, is productive of the largest results. But the treatment of any diseased condition is so large a subject and has to do with so many uncertain elements that are not thoroughly understood, that the attempt to classify and bring into order is very often more destructive than beneficial.

It is astonishing how many different ways of seeing things there are for different persons, and what opposite results are arrived at by equally intelligent people. Possibly this is the result of the omission

* A portion of this paper appeared in the American Medico-Surgical Bulletin, January, 1894.

of small, apparently trivial factors. Possibly it is sometimes owing to the inherent unconscious vanity of most people to desire to make the object of their research fit their already-formed conclusions. The truth of a paragraph that I saw not long since recurs to me and seems to have a special applicability to the discussion of medical subjects. It was that "the position of a genuine searcher for truth must be one of a sort of agnosticism, and he must be actuated by a constant supersensitiveness for truth."

There are many cases of consumption which are purely pulmonary in which there can be no doubt that a rest-cure might work the happiest results. They are cases in which the bankrupt condition has not generally affected the body. By reforming the corrupt official, the rest of the body being in accord with the physician, we have a restoration to health.

But, unfortunately, we have many cases in which you cannot put your finger on any one part and say, "it is here the trouble is," for the whole body of officials and employees are constitutionally corrupt, and in place of good coin are constantly turning over imperfect and counterfeit material. The patient is not only suffering physiological starvation, but is constantly being poisoned by the very food he takes in to nourish him. This condition might be called one of suboxidation, and is a condition that is not sufficiently considered in treatises on tubercular phthisis. In many cases we have tubercle in almost every tissue of the body, lungs, bowels, kidneys, liver, skin. In feeding these cases we have to take this condition of suboxidation into consideration. We have not only to build up new tissue to supply the waste, but we have to supply the elements necessary to oxidize and carry off the double waste going on as well from the broken-down tissues as from the excess of food which is not "burned up" as it should be in a normal condition. The latter element, of course, can be more or less governed by regulation of the food supply, but whether entirely or not is a very doubtful question, and it is probable that there is always a very variable factor of imperfectly digested food to take into consideration. This is a point that is very much neglected in general practice.

Every one is familiar with the fact that the food we take within us contains the elements of death as well as of life. That which is innocent and life-giving in one case is deadly poisonous in another because of functional or organic incapacity of the vital tissues. There is one food, however, that can, it seems, be taken in almost immeasurable quantities. This is oxygen, and is the element required to relieve the condition of suboxidation.

How, it may be asked, are we going to increase the consumption of oxygen or produce a forced consumption of that element? By exercise in the open air. The law of a living, healthy human animal is action; and any attempt to reduce him to a plant life or vegetative existence is followed by a retrograded condition, physically and mentally. There are many persons to whom a very moderate amount of confinement means degenerative changes and death. This may more especially be the case with persons who have always been in the habit of leading an active life.

How many unfortunate cases have we seen who were rapidly wasting away in the possession of all the luxuries that wealth and friends can give them.

How many others have we seen who, on account of circumstances of poverty, necessity or ambition, have been compelled to keep at their posts and who have worked and suffered half a lifetime before giving up to the destroyer.

It is argued by the advocates of a rest-cure that the vital energies should be conserved toward the building up of new tissues to take the place of the degenerated and diseased tissue. But this is taking it for granted that the emunctories will do all of their work with the patient in a quiescent state. Our experience is that the emunctories are sadly at fault here, and without a discreet amount of exercise are very apt to be deficient. Indeed, it seems essential that in order to build up healthy tissue one must tear down tissue; and the more rapidly, within certain limits, this change of waste and repair goes on, the better. But it is necessary to the success of this theory that the waste and repair should take place in presence of a free supply of oxygen, so that the tissue that may be laid up is stable and of high vitality and the waste that is removed shall be carried off without development of by-products.

This brings us to the kind of exercise

recommended, which should be that which will be productive of mild stimulation of all the tissues of the body without undue fatigue, without over-production of animal heat, and which should take place in an atmosphere containing a free supply of oxygen.

What will give this? Walking or the judicious use of the bicycle, *and nothing else!* There is no form of horseback or carriage exercise that will take the place of these. Most all other kinds of outdoor exercise are too violent, and no kind of indoor exercise is suitable on account of the absence of pure air.

There is another point that is attained by this treatment, which is very important: It stimulates the peripheral circulation and nicely regulates the heat centers, preserving an even temperature—two things which are very much in default in many chronic cases. It is well known that in many cases of constitutional phthisis there is frequently a tendency to irregularities of circulation, with internal congestions and great disturbance of the heat centers. Everything, then, which interferes with the action of those centers, such as quiescent conditions in the open air, especially during damp, cool weather, favors congestion, and every congestion, even though of very short duration, intensifies any local trouble wherever it may be situated in the body. Hence can be seen the ill effects of carriage-riding in any but the warmest weather. It is astonishing, notwithstanding the fact that cool, dry weather is the best for consumptives, how much apparently unfavorable weather can be endured, provided a person is thoroughly protected by suitable dress and mild exercise.

Though I do not pretend to be much of a believer in hypnotism, mind-cures, etc., I must say that I think the will may have much to do in conquering these wasting diseases, especially when coupled with the most enlightened treatment that can be had.

Just here I would like to introduce a very apt sketch to illustrate this power of resolution. In the "Memoirs of Vidocq, Chief of the French Police," a little book which I once picked up, there is a story of a soldier who, being stricken with consumption, lay in his tent paralyzed with fear and hopelessness. In his agony he betakes himself to the tent of his commander and requests a discharge, giving as motive his physical condition. The captain speaks roughly to him, tells him that the only medicine for his trouble is a bullet, and refuses him his discharge. Wandering around in a dazed condition one day during the occurrence of a severe military engagement, he has an opportunity to distinguish himself by hurling away a lighted bomb which was about to explode, thereby saving the lives of a number of his companions. A few days afterward again at the risk of his life he rescues a woman and her child from a burning building, and from that day, by application and personal bravery, was repeatedly promoted until he became general of a division. The narrator prefaces his remarks with a personal description of the man, which represents him not, as one might suppose, lusty and well favored, but looking, as I have seen many a man look who had lived long and well, "a death's-head surmounting a bag of bones!"

It is a question with us, even if it were possible, whether it is well to lay on much flesh in a well-marked case of phthisis. For that which is formed under forced feeding without much exercise is of a vitality lower than in a normal, healthy person.

This is particularly the case in hereditary examples. The result may be that if at any time subsequently, as result of hardship, misfortune or mental overwork, the subject may acquire a return of the disease, on account of the lower vitality of the new-formed tissues they will rapidly waste, using up in their combustion the life-giving oxygen which should be devoted to supplying the vital forces. The result is that we have immediately the condition of suboxidation spoken of above, and the patient, unless skillfully treated, is likely to be drowned in his own excretions.

We believe that the majority of phthisical cases may be saved to long life, if not cured, if we can have the most favorable environment and treatment. The difficulty is that it is almost impossible to regulate the treatment and environments of patients outside of special hospitals. With proper food, times of eating, etc., suitable clothing, attention to all the most minute particulars of sleeping-rooms, heating, bedclothes, living-rooms, bath-rooms, bathing, closets, etc., then with proper

exercise and rest and some interesting, easy, but not too engrossing or exacting pursuit, the lives of consumptives might be made an Eden of perennial joy.

There is one thing that cannot be too much insisted upon. Consumptives ought never to be *impecunious*, but ought either to be the sons or daughters of wealthy parents or ought to inherit or acquire wealth in some manner. For this reason: that for years after an apparent restoration to a fair degree of health the consumptive ought not to be subject to the ordinary exactions and sacrifices of making a living in this busy world. For it is always certain, if they are so subject, that a day may come when a little extra strain or exposure will start them on the down path again and bring back all the original symptoms.

A few remarks might with advantage be added on the subject of feeding in consumptive cases who are pursuing an active outdoor life.

It is interesting to note that imperfect starch digestion is one of the peculiarities in the disease, and this notwithstanding the fact that a certain amount of starch is very necessary to the production of a healthy state of the body.

The proof of the above is evidenced by the natural repugnance which many consumptives have for starchy food, and that when it is ingested in any great quantity the result is almost always either a good deal of diarrhœal trouble or else flatus, and foul gases are expelled by the rectum.

In this connection we submit that these gases, which are generally supposed to be pathological in the sense that they should be opposed by antiseptic medication, are, in our opinion, conservative; that they are by-products which by their generation prevent the formation of more injurious waste products, and by their expulsion prevent diarrhœa and intestinal irritation; that when formed the patient should be encouraged in the habit of getting rid of them per anum.

One of the most promising signs, then, of convalescence in consumptive cases is the ability to digest starchy food. The long train of symptoms, such as cold extremities, irregular heat production and the tendency to local congestive conditions, is at once alleviated and a sense of well-being never before experienced is obtained.

An individual may exist for a long time on a course of meats and nitrogenous foods, but that treatment is only preliminary to the addition of starch food to the diet, which must take place to complete the cure. This is sometimes attempted by the substitution of alcohol, one of the congeners of starch, but it is a feeble and often dangerous staff and as often breaks the patient or fails utterly. With alcohol it is often a question of dying of consumption or of delirium tremens, and the patient must choose between the two.

Oxygen and outdoor exercise are the necessary adjuncts to starch digestion, and it is interesting to find, with the use of these, what an amount of starchy food can finally come to be disposed of by the digestive tract. One also will find almost invariably that whenever circumstances render outdoor exercise temporarily inconvenient or impossible, the starchy food must be immediately cut down or one will have as a result increased flatus or diarrhœa.

Another point of interest, too, is the peculiar idiosyncrasy of some patients as to the variety of starchy food which is taken, the manner of cooking, etc. As a general rule white potatoes, baked and served hot and fresh from the oven, are better assimilated than any other form of starch unless it be wheat bread. The same holds good for sweet potatoes, and one great desideratum is that they should always be dry—not water-soaked. Some patients can eat chestnuts, boiled or roasted, when all other starches are repugnant and indigestible, and absurd as it may seem, I have seen one patient who in the early chestnut season could devour quantities of fresh raw chestnuts almost *ad libitum*, when at the same time his lower intestinal tract was in such an ulcerated condition that specks of blood were passed with the stools.

For Incontinence of Urine.

Sodii benzoati	grs. xv
Sodii salicylatis	grs. xvij
Ext. belladonnæ	grs. xxx
Aq. cinnamomi, q. s. ad	fl ℥ iv

A teaspoonful to be taken four or five times a day.

A Good Evaporating Lotion.

Ammonii chloridi	℥ j
Sp rectificati	℥ ij
Sp. ætheris	℥ j
Acid. acetic	℥ jss
Aq. destill. q. s. ad	℥ xij

Solve et M. To be applied on lint in severe sprains etc.

COMMUNICATIONS.

ACUTE INFLAMMATION OF THE MIDDLE EAR, TERMINATING IN [PURULENT PERIPHLEBITIS OF THE LATERAL SINUS AND THROMBOSIS—OPERATION—RECOVERY.*

ALBERT H. BUCK, M.D., NEW YORK.

The patient, a man of strong physique, about fifty-four years of age, consulted me on January 29, 1894, for the relief of pain in the left ear. For several days previously he had been suffering from a "cold in the head," and on the preceding day he had taken a sleigh-ride; but he had not been conscious of having experienced at the time any chilling of the body. The pain had first been felt early in the morning of the day following that on which he took the sleigh-ride—that is, only a few hours before he came to my office. I examined the ear and found the membrana tympani, especially the upper half, markedly hyperæmic. There was also a decidedly congested and swollen condition of the naso-pharyngeal mucous membrane. No secretion had as yet accumulated in the drum cavity. An application of a fifteen-grain silver nitrate solution was made to the vault of the pharynx, and hot poulticing and rest in bed were prescribed.

On the following day I visited the patient at his home and found that he had experienced very little if any relief from the pain in the ear. The appearance of the drum membrane showed that the drum cavity was already full of secretion, and that the inflammation was increasing in violence despite the hot and moist applications. I accordingly made a long, crescent-shaped incision in the posterior half of the membrane, affording a free outlet to the pent-up blood-stained serum, and I ordered a continuance of the poulticing and the free use of the hot-water douche.

The paracentesis afforded a measurable degree of relief, but only for a short time. On February 3d, 5th, 7th and 10th it was found necessary, on account of the rapidity with which the opening healed and on account of the return of pain whenever the opening ceased to be of fairly large size, to repeat the paracentesis. Soon after the first operation the discharge became purulent in character and quite abundant. On February 11th or 12th there was a slight tenderness on pressure behind the ear, and accordingly three leeches were applied to this region.

On the 14th, as the leeches had afforded only temporary relief, a Wilde's incision was made; and on the following day a seton was established at this point. A very broad, curved needle (made specially for the purpose), with cutting edges and armed with six or eight threads of coarse silk, was introduced at the bottom of the Wilde's incision and pushed out backward through the skin at a spot about one inch distant from the point where it had entered.

The discharge from this artificial sinus, kept in an irritated condition by the presence of the mass of silk, failed to exert any marked impression upon the amount of discharge from the middle ear or upon the subjective pain experienced by the patient. After the seton had been in place for four or five days, the patient had a sharp chill which lasted for a few minutes, but was not followed by any appreciable rise in temperature. (The patient's body temperature was tested nearly every day and sometimes twice a day, but it was always found to be either normal or at most two-tenths or three-tenths of a degree above the normal.) At the time I felt confident that this chill was due to the imprisonment of pus in the seton channel; for when I examined the parts one or two hours afterward I found both orifices practically closed by the drying up and caking of the discharge

*Read before the American Otological Society, 1894.

at these points, and even in the light of later developments I am still disposed to look upon this as the correct explanation.

On February 21st Dr. Herman Knapp saw the patient with me in consultation. The pain had not been materially diminished by any of the measures which I had instituted—repeated paracenteses, hot poulticing and frequent douching of the external auditory canal, the application of leeches to the mastoid region, a Wilde's incision followed by the introduction of a seton, an occasional dose of calomel, the daily employment of the Carlsbad Sprudel salts, etc.—and it was becoming more distinctly hemicranial in character. I therefore felt that the time had arrived when it would be wise to establish a free outlet from the mastoid antrum through the mass of bone lying outside of it. On this particular day, however, the patient felt decidedly better than he had felt for several days previously, and we accordingly agreed to postpone, at least for the moment, the consideration of the question of operative interference. It was decided, however, to remove the seton, for it was apparently accomplishing no good purpose, yet at the same time it was preventing us from estimating correctly, by aid of such signs as tenderness on pressure, swelling, etc., of the skin, how the underlying mastoid inflammation was behaving. Dr. Knapp's examination of the patient's left eye with the ophthalmoscope gave a negative result.

On the following day (February 22d) the patient once more complained of decided pain in and around the ear; and as the opening in the drum membrane had by this time again become insufficiently large for free drainage of the inflamed middle ear, I excised a small portion of it by first making a flap (with its base below) and then snaring off its upper free extremity. The incision which marked the posterior limit of this flap approached very closely to the curved line corresponding to the insertion of the membrana tympani in the sulcus tympanicus, and as the knife passed through the thickened tissues of the membrane there was a sudden escape of thick creamy pus quite different from the muco-purulent secretion escaping from the old opening in the membrane. By further manipulations I succeeded in dislodging through the opening a core-like mass as large as a No. 3 shot. The introduction of a bent middle-ear probe revealed the fact that the posterior wall of the cavity from which this creamy pus and this core-like mass of broken-down tissue had been evacuated was bone denuded of its covering of mucous membrane. In other words, I had accidentally evacuated a separate collection of pus located at the posterior end of the tympanic cavity between the surface of the bone and the mucous membrane (periosteum), just beneath the entrance to the mastoid antrum. In the natural state the bone at this point is somewhat rough and irregular. From the sense of touch alone, therefore, I could draw no safe conclusion as to its condition. There could be no doubt, however, about its being in a state of inflammation.

The relief afforded by this operation was but very little, if at all, greater than that afforded by my previous simple paracenteses.

On March 1st Dr. Knapp again saw the patient with me, and it was decided to cut down to the antrum. The operation was performed in the usual manner. No well-marked pneumatic cells were encountered until I had chiseled away the bone to a depth of nearly half an inch. These cells were all found to be filled with granulation tissue, and at all points the bone substance was found to be in a condition of marked hyperæmia. Close to the antrum, however, it was found to be of a bluish-black color and softened. No pus was encountered until the antrum was reached, and then only a barely recognizable amount. Every portion of the wound, the antrum and the tympanic cavity proper was thoroughly irrigated with a 1:4,000 bichloride solution—the fluid escaping freely from the middle ear into the external auditory canal. No sutures were employed, and the wound was dressed with iodoform gauze.

From March 1st to the 16th nothing worthy of special note occurred. The operation caused the pain to almost disappear at first, but gradually it returned and steadily increased up to the date last mentioned. Then, in the belief that there might perhaps be some obstruction to the free escape of pus, I reopened the wound freely and with a Volkmann's spoon cleared away all the granulation tissue which had formed in the antrum and in the excavation made in the bone out-

side of the antrum. This procedure, however, afforded only temporary relief. From time to time during the following three weeks I tried different kinds of drainage-tubes and contrivances, in the hope of securing complete freedom from pressure upon the mass of escaping pus; for whenever I succeeded in accomplishing this, even for a short time, I observed that the patient experienced comparative freedom from pain. But the discharge was abundant and granulation tissue repeatedly blocked the openings in the drainage-tube, thus reëstablishing the condition of pressure which was so undesirable. It was during this period that the patient had the second and last chill that he experienced during the entire illness. The drainage-tube at the time was completely blocked, and there was an appreciable increase in tension of the skin surrounding the outlet. I am unable to state whether this second chill was or was not associated with a rise in the body temperature.

Toward the end of the period now under consideration there was a noticeable increase in the redness and swelling of the integuments covering the lower and posterior part of the mastoid process, and the lateral movements of the head caused some distress. But there was no tenderness along the side of the neck, and the tenderness over the tip and posterior aspect of the mastoid bone was but little, if at all, greater than one usually finds in the vicinity of a still open mastoid wound. The discharge, however, was more copious than it should be from such a wound, and I made up my mind that there must be a center of active osteitis in the lower part of the mastoid bone. Accordingly, on April 9th the patient was put under the influence of chloroform, and a considerable portion of the lower part of the mastoid process was removed by chiseling. No center of pus was found, but everywhere the bone appeared to be in a markedly hyperæmic state.

During the week following this operation the patient's condition steadily grew worse in the following respects: The movements of the head became more painful, there began to be an appreciable degree of tenderness below the mastoid process, and the swelling, tenderness and pain in the region lying between the mastoid bone and the occiput increased to an appreciable degree. Then, besides, he found that he could read for only a short time, on account of the pain which it produced in the left eye. On the other hand, the body temperature did not rise above 99.4° F., the pulse-rate did not exceed 82 beats to the minute, and the patient continued to take his food with relish. The symptoms just enumerated, however, satisfied me that the inflammation was extending in a backward and perhaps inward direction, and that a bolder search for some center of pus should be made in these directions. This conclusion was still further strengthened by my finding, on April 13th, that pus from some new source, situated below the artificial opening in the bone, was burrowing down the side of the neck in front of the sterno-cleido-mastoid muscle.

On April 14th the patient was brought under the influence of chloroform, and I proceeded to chisel away the outer and posterior surface of the mastoid process. At all points the bone was found to be markedly hyperæmic, but no pus or appreciable softening of the bone substance was found until the immediate wall of the channel for the lateral sinus (sigmoid groove) was reached. At this point, situated at a depth of fully half an inch from the outer surface of the mastoid process, the bone seemed to have undergone a certain degree of softening, and odorless, creamy pus welled up from this cavity as soon as the chisel cut through the surrounding softened wall of bone. By means partly of the chisel and partly of a medium-sized Volkmann's spoon I enlarged the opening until it measurep about three-eighths of an inch in diameter. The outer wall of the exposed vein was found to be granulating, but not softened, so far as I could judge by pressure with the probe. The absence of all tension warranted the belief that the vein was thrombosed at this point. So far as I could judge, the pus surrounding the vein came partly from some point higher up and partly from below. I fully expected to discover roughened bone or the opening of a fistula at some point along the anterior aspect of the sigmoid groove, but my probe revealed no such point.

The situation of affairs, as brought to light more fully by this operation, made me feel that I could no longer do full

justice to the case; that in the further search for centers of pus regions would have to be laid bare with which I did not feel myself to be sufficiently familiar; and that, therefore, a general surgeon should be summoned. Accordingly Dr. Frederick Lange was invited to take charge. The patient was once more anæsthetized (April 16th), and Dr. Lange proceeded first to expose thoroughly the downward track of the pus along the jugular vein. Then he removed, by chiseling and by the use of the rongeur forceps, all that remained of the mastoid process; thus laying bare the jugular vein from its situation in the sigmoid groove down to a point perhaps one inch below the level of the tip of the mastoid process. All of the jugular vein thus exposed to view was evidently in a thrombosed condition, as its walls showed no changes in tension when firm pressure was made upon the side of the neck lower down or when the patient coughed. Dr. Lange also removed, in an upward direction, enough of the squamous portion of the temporal bone, where it forms the outer wall of the vertical part of the lateral sinus, to give him free access to any collection of pus that might exist in this part of the cranial cavity. No such collection, however, was found. Then, finally, he worked his way cautiously downward and inward until he had exposed the styloid process, the trunk of the facial nerve as it emerges from the stylo-mastoid foramen, and the region beneath the foramen lacerum. The probe was passed through this opening into the cranial cavity, but no collection of pus was found. All this work, I scarcely need to state, was performed under constant aseptic and antiseptic precautions. After the operation was completed a drainage-tube was laid in the wound, with its inner end resting against the deepest part of the excavation, and iodoform gauze was packed around it. A few turns of a bichloride gauze bandage served to keep the dressings well in place.

On the day following the operation the temperature rose to 100.4° F., and then gradually fell, during the course of the following week, to normal. The pain in the left eye brought on by reading gradually disappeared, and with it the slight alterations observed by Dr. Knapp, shortly after the operation, in the fundus of the eye. At the end of three weeks the patient was allowed to leave his bed, and at the present time of writing (May 27th) the wound has progressed so far toward healing that its complete cicatrization may be looked for in the course of the next two or three weeks. No drawbacks of any kind have occurred during this period.

The discharge from the middle ear, by way of the external auditory canal, ceased on the third or fourth day after the first operation upon the mastoid process; but on two or three subsequent occasions it returned for brief periods of time. It was not clear to what these slight relapses were due; but it is probable that some interference with the drainage from the antrum, by way of the outside wound, caused sufficient back pressure to reopen the perforation in the membrana tympani.

Throughout almost the entire attack the hearing in the affected ear remained fairly good, and soon after the last operation it returned to a practically normal condition.

Comments.—The most striking feature in this case, as it seems to me, is to be found in the fact that the disease began, almost at the very start, as an osteitis. There was, it is true, the usual antecedent naso-pharyngeal inflammation, and this inflammation spread in the usual manner to the mucous membrane of the middle ear. But the course which it pursued after it had reached the latter cavity was certainly very different from that which we are accustomed to see in the vast majority of cases. I have often said to myself, and have perhaps expressed the view to others, that if an acute inflammation of the middle ear (not associated with diphtheria, measles, scarlet fever, smallpox or typhoid fever) could be subjected to suitable treatment within the first twenty-four hours, it would never progress so far as to seriously involve the neighboring mastoid process. In the present instance the patient presented himself within a few hours of the time when he felt the first twinges of pain in the ear. Simple antiphlogistic measures were employed immediately, and then, as soon as any secretion had accumulated in the drum cavity—that is, at the end of twenty-four hours—a very free opening was made in the drum membrane in order that intratympanic pressure—the factor which is believed to play perhaps the most impor-

tant part in the aggravation and further spread of an acute middle-ear inflammation—might be quickly done away with. But it is evident that in the present instance only a very transient beneficial effect was produced by this and the succeeding efforts to reduce intra-tympanic pressure to a minimum, or by the other antiphlogistic measures employed. The most plausible explanation of this lack of success in arresting the inflammation is to be found, I believe, in the assumption —which is strengthened by the facts revealed in the latter course of the disease—that already at this early stage the inflammation of the adjacent bone, particularly that portion which lies near the posterior end of the tympanum and around the antrum, had gathered considerable headway. It is not unlikely, furthermore, that there may have been certain anatomical peculiarities which rendered this mastoid bone more than ordinarily liable to participate in any inflammation that might develop in the contiguous tympanic mucous membrane. As favoring this view, I may mention the facts that seventeen years ago I operated upon this same patient's right mastoid process, and that one of the most troublesome features in the case was an obstinate tendency to the formation of firm granulation tissue around a small spot of bone caries situated at the posterior end of the tympanum, just beneath the entrance to the antrum.

The absence of fever and of chills (the two mentioned in the history of the case were, I believe, due to special conditions) may also be noted as something unusual. The absence of these symptoms probably indicated that up to the time of my last operation the inflammation had not gone much beyond the stage of periphlebitis of the lateral sinus, and that whatever actual phlebitis existed must have been of a mild, non-infective character, simply active enough to create a thrombus.

The present case and others of a more or less similar nature that are to be found recorded in medical literature justify the establishment of a rule something like the following: The persistence of deep-seated pain behind the mastoid process after the antrum has been opened into and thoroughly drained, is sufficient warrant for making an opening into the sigmoid groove for the lateral sinus; and it is not advisable to wait until the patient has chills, or until the body temperature rises to an appreciable degree, before resorting to operative interference in this direction. If we wait for the corroborative evidence furnished by the symptoms last named, we shall lose lives that might otherwise be saved.

CHRONIC TYMPANIC VERTIGO—ITS RELIEF BY SURGICAL LIBERATION OF THE STAPES.*

CHARLES HENRY BURNETT, M.D., PHILADELPHIA.

Inspection of the mechanism of the conductors of sound reveals an arrangement peculiarly well adapted to carry the stapes inward toward the labyrinth. Such inward excursion of the ossicles is in fact made in every normal ear with every wave of sound falling on it. That a limit to this inward motion of the stapes is desirable is shown by the presence of the stapedius muscle, the antagonist of the tensor tympani. The latter muscle draws the malleus inward and aids it to force the incus and mediately the stapes inward. If abnormal retraction in the conductors ensues from any cause, the stapes, being the weakest of the conductors of sound, is forced unduly into the oval window. Excessive pressure is thus exercised upon the labyrinth fluid, the motor filaments of the auditory nerve are irritated and vertigo is the result. If such morbid retraction in the conductors of sound is of frequent and prolonged occurrence, as in chronic catarrh of the middle ear, chronic vertigo may be added to the tinnitus and deafness already present.

*Read by title before the American Otological Society, 1894.

For such phenomena of disturbed equilibration in chronic catarrh of the middle ear (sclerosis), I have suggested the name of chronic tympanic vertigo. The term Ménière's has been applied usually to this affection. But this is a misnomer, for Ménière's disease means a disease of the labyrinth and not a diseaseof the middle ear.

Chronic tympanic vertigo usually occurs in an ear which has been for some time previous the seat of tinnitus and deafness from a chronic catarrhal process in the drum cavity. The nares and naso-pharynx usually show by this time no disease, though the catarrhal process may have started there. The membrana tympani will be found markedly and continuously retracted, and the stapes therefore unduly pressed into the oval window and held there by the overpowering weight and force of the malleus and incus.

A characteristic feature of chronic tympanic vertigo is its paroxysmal occurrence. This is due to the fact that the labyrinth tolerates to some extent the chronic pressure of the stapes; but a change in the circulation in the middle ear, in varying conditions of health of the patient, brings about increased retraction in the already retracted ossicles, undue inward pressure of the stapes ensues, and a paroxysm of vertigo of longer or shorter duration sets in. The same phenomena appear when the quantity of lymph in the labyrinth is increased in a general afflux of lymph to the head, in a case where the labyrinth space is compromised by a chronically impacted stapes. The paroxysmal nature of chronic tympanic vertigo distinguishes it from the vertigo from a tumor in or near the auditory nerve, which is always constant, though it may be slight. Retention of consciousness, even in the worst cases, where the patients reel and fall, serves to distinguish tympanic vertigo from epilepsy and apoplexy—though it is unfortunately too often mistaken for these maladies.

The only way to relieve chronic tympanic vertigo is to liberate the stapes. This is best accomplished by elimination of the incus from the retracted chain of ossicles. Thus the power of the retracted lever is overcome, and the stapedius, relieved of its forceful antagonist, the tensor tympani, lends assistance in drawing the stapes from the oval window, and the morbidly impacted bonelet is liberated.

That morbid retraction of the conductors of sound and impaction of the stapes are the cause of chronic tympanic vertigo, and that this disease is relievable by removal of the incus, is amply demonstrated by the following cases, which are the latest in a series of 20 similar ones.

Case XVII (in a series of 20).—Mrs. K , aged forty-six, of Maryland, consulted me December, 1893. The patient had an attack of acute catarrh in the head over three years before the date of her first visit to me. Soon after the catarrh of the nares and naso-pharynx, tinnitus and dullness of hearing were observed in the left ear, and fifteen months later vertigo was felt, and attributed by the patient to the discomfort in her ear. She felt more or less vertigo all the time, became depressed in spirits and suffered from more frequent and severe paroxysms of tympanic vertigo. These attacks numbered at least two or three a month, and made the patient unwilling to leave the house alone. Finally, after much treatment for nervous prostration, but none for her ear, the seat of the disease, the case was taken to Dr. S. Weir Mitchell, who, recognizing the true nature of the disease, referred the sufferer to me.

Otoscopic examination revealed a thickened membrana on the left side; incus not visible through the membrane; hearing much reduced; nares normal. Chronic tympanic vertigo, due to retraction of the ossicles and undue impaction of the stapes in the oval window, was diagnosticated, and the removal of the incus advised in order to liberate the stapes.

Consequently, though the patient was in a very nervous condition, she was etherized January 23, 1894, and the incus removed after myringotomy in the upper posterior quadrant of the membrana.

January 24th. The patient can walk decidedly better and is very cheerful. Hearing unimproved and tinnitus unchanged. The patient goes home to-day.

Unfortunately this patient took cold on her way home and seemed worse in every way for some time. By March 15th, however, when she came to see me, I found that the tinnitus was much less, there had been no paroxysms of intense vertigo for some weeks, and, in fact, the vertiginous tendency seemed permanently banished. The patient looked five years younger and

was very active on her feet, being no longer in fear of vertigo and falling. Thus the object of the operation had been attained.

CASE XVIII.—Mr. W. P., of Philadelphia, aged thirty-four, a clerk, consulted me January 29, 1894, for tinnitus in the right ear, more or less paroxysmal in nature and culminating at times in vertigo.

Otoscopic examination of the right membrana revealed that the membrane was perforated below the manubrium, and through the heart-shaped opening the mucous membrane beyond gave evidence of having been the seat of chronic purulency. The rest of the membrana was thick and rigid, seemingly attached to the incus or its remnant and lying against and pushing inward the stapes; which bone, however, was not visible.

The deafness in this ear was profound. For two months previous the tinnitus had been increasing in the right ear and the patient had experienced an unaccountable tendency to vertigo, which he supposed to be due to stomachic derangement. The exacerbations of vertigo became more frequent and more intense until the patient was afraid to walk in the street alone, and at last in February he ceased to go to his business on account of disability induced by the tinnitus and tympanic vertigo.

It now became manifest that these disagreeable symptoms in the right ear were due to impaction of the stapes in the oval window. It was therefore proposed to liberate the stapes by cutting into the thickened upper posterior quadrant of the membrana tympani and then removing the incus. The patient was etherized March 2, 1894, and a wide incision made in the thick membrana. A piece of the long shaft of the incus (the only vestige of this bonelet) was found imbedded in the thickened membrana and removed. This exposed and liberated the stapes, which was found to be very movable. Owing to the upward shrinking of the membrana, as I have observed in other cases of loss of the incus from chronic suppuration, the stapes appeared relatively very low, nearly on a line with the lower end of the manubrium. The stapes is still plainly visible and readily movable. After the operation the vertiginous tendency diminished. In a week the patient was able to walk alone in the street, and he returned to business. The tinnitus grew less, but not as rapidly as the vertigo. The hearing was not improved.

In 7 other cases of tympanotomy and removal of the incus I have found at the time of the operation mobility of the stapes, notwithstanding the usual symptoms of chronic catarrh of the middle ear. Tinnitus and vertigo have been relieved in all of these, but the deafness has remained unchanged, notwithstanding the persistent mobility of the stirrup. This I believe to be due to the fact that in these cases the proximal nerve structures in the percipient organ—those nearest to the vascular structures of the middle ear and most readily affected by the catarrhal disease in the tympanum—are atrophied, while the distal nerve-tissues in the semicircular canals—those most remote from the chronic vascular changes in the drum cavity—retain their functions and are impressed by impaction of the stapes.

CASE XIX.—Miss H. O., of New York, forty-seven years of age, had suffered from chronic catarrhal deafness and tinnitus for several years. Finally chronic tympanic vertigo had been developed. Otoscopic examination March 14, 1894, revealed a greatly retracted and thickened membrana tympani; incus not visible through the membrane; no hearing on this side. March 16th the patient was etherized and myringotomy in the upper posterior quadrant was performed. The incus-stapes connection could not be seen. The incus, however, was carefully disarticulated from the stapes by means or an incus hook-knife and its long shaft drawn into view. The incus was adherent in the attic, and when traction was made to remove the bone the long descending shaft broke off. The ear was then slightly stopped with boric-acid cotton. The patient went home in four days. No reaction occurred in the ear.

May 10, 1894. The patient called to see me and reported much less tinnitus and a greatly diminished tendency to vertigo.

CASE XX.—Mrs. C., of Philadelphia, aged forty-seven, consulted me regarding aural vertigo April 2, 1894. The patient stated that she had suffered from chronic catarrhal deafness and tinnitus in both ears for several years. Within four months the tinnitus in the right ear had greatly increased and was so intense at times as to cause dizziness and faintness.

Otoscopic examination revealed a thickened membrana, retracted and forming a very obtuse angle with the posterior wall of the auditory canal. The incus could not be seen through the membrana. Chronic tympanic vertigo from undue retraction and impaction of the stapes was diagnosticated, and the patient was advised to submit to removal of the incus, for which operation she had been, indeed, sent to me. Therefore on April 17, 1894, the patient was etherized and the incus, which was placed high in the attic, was removed with difficulty, because the manipulations in such a case must be excessively delicate and very slow for the sake of caution and gentleness.

The patient felt no relief of any kind for ten days; then the tinnitus diminished and there was much less tendency to vertigo.

The hearing in the left ear had by this time improved considerably; tuning-fork $\frac{4}{11}$, against nothing before the operation. She hears isolated words, too, much better—six inches before the operation; one to two feet now. The tongue is numb on top from irritation of the chorda tympani.

April 30th. Tinnitus very slight and no tendency to dizziness or vertigo. Hears conversation much better in the right ear.

May 7th. The patient continues free from vertigo, notwithstanding a severe cold. Perforation in the membrana has been closed a month.

TRANSLATIONS.

CATHETERISM OF ARTERIES.*

Severeanu, of Bucharest, Roumania (*Le Progrès Médicale*, August 11, 1894), remarks that it seems paradoxical that any one should find it necessary to introduce a sound into the lumen of an artery for any purpose whatever. Every one knows the frequency of gangrene due to arterial embolism which by obstructing the artery arrests the course of the blood and causes the death by default of nutrition of the parts supplied by this vessel. It is thus that are produced septic gangrenes in typhoid fever and petechial typhus, some of the gangrenes of old people and the gangrene of certain people (Turks) who have the habit of maintaining their limbs in flexion for a long time. In these different cases the embolus is due either to atheroma in old people, to a clot which separates from the heart (endocarditis), to a coagulation of the fibrin of the blood by germs or toxines not yet well defined (typhus, typhoid fever, pneumonia), or, finally, it may be produced by a vicious attitude of the members prolonged for a considerable time and frequently repeated. The clot formed, either in the heart or higher, is swept on by the current of blood until it arrives at a strait where the caliber of the artery is narrower than the volume of the clot, when it stops and plays the *rôle* of a cork. The terminal segment of the affected member is exposed to death if the lumen of the vessel is completely obstructed or if the important collateral branches do not reestablish the course of the blood. Generally the embolus is arrested at a point of arterial bifurcation. Thus it is most frequently observed at the level of the elbow-joint, where the humeral artery divides into two branches, the ulnar and radial, and more often still in the popliteal space, where the femoral artery divides into the anterior tibial and tibio-peroneal trunks; hence the frequency of gangrene of the hand and forearm and of the foot and leg. The greatest number of gangrenes observed by Severeanu have been in the foot. Once only has he observed it in the hand and forearm, and this in a woman with heart disease; in this case he amputated the forearm in its upper third. In the case of gangrene of the foot, in order to insure a good result he has always sacrificed a long segment of the member, carrying his incision up to the point where he could detect the pulsations

*Translated for THE MEDICAL AND SURGICAL REPORTER by W. A. N. Dorland, M.D.

of the artery. In cases where he has not followed this rule he has had the mortification of seeing the flaps become gangrenous, necessitating a secondary amputation or a prolonged process of cicatrization. This has suggested to him the idea of opening by a sound the branches of bifurcation of the popliteal artery, which are found not to pulsate at the level of the third adductors. He employed this process for the first time upon a man of fifty or sixty years, upon whom he had operated for gangrene of the foot consecutive to a cardiac embolus. The artery pulsated only at a high level; the gangrene had invaded the leg and did not manifest a tendency to limit itself. Amputation being positively indicated, in order to have the best chances of success he determined to practice amputation of the leg at the point of election. During the entire operation there was very little hemorrhage, rather capillary than arterial. Rubber sounds (Nos. 1, 2, 3 of the Charrière caliber) were prepared in advance, rendered aseptic by means of alcohol and carbolic acid, and introduced throughout their length into the lumen of the arteries, and on being pushed in and out the blood commenced to flow by the side of the sound. Having withdrawn the sound, the blood current carried out several cylindric clots having the shape and caliber of the artery, and the current of the blood was reëstablished. The arteries being ligated, the capillary hemorrhage became more abundant and the tissues assumed a more lively color. Following this maneuver the flaps did not become gangrenous, and reunion by the first intention was secured. Since then he has in every instance in which he discovered obliterated arteries practiced catheterism of the vessels, and has always congratulated himself upon the result. Usually the sound enters completely into the lumen of the artery, but in some cases this is impossible on account of adhesions between the clot and arterial walls; the flaps will then partially or completely mortify.

RECENT GERMAN SURGERY OF GALL-STONES.*

Dr. H. Kehr, of Halberstadt (quoted in "Schmidt's Jahrbücher von Gesammten Medicin"), out of 77 cœliotomies for gall-stones, found the calculus more or less firmly fixed in the cystic duct in 26 cases. As the accepted process for their removal failed in 7 cases, he resolved upon a new (or at least unreported) procedure, namely, the direct excision of the stone from the cystic duct, with immediate suture of the wound in the duct. With this method he has had the best results. Formerly he employed the suture of the gall-bladder in the abdominal wound and waited for the pressure of bile from behind in conjunction with the diminishing swelling of the mucous membrane to force out the calculus. Now he resolves upon an immediate cystico-lithectomy if he is convinced that the stone will not be spontaneously discharged, if he feels that it is too large to pass through the contracted cystic duct, if the condition of the patient allows further operation, if the cystic duct can be freely exposed so as to render its accurate suture possible, if an immediate evacuation of the cystic duct is necessary for drainage of the biliary system.

Dr. Kehr reports a series of 68 operative attacks on biliary calculi, in addition to 25 previously reported. The cases are grouped as follows:

1. Cholecystostomy, 31; with 1 death from suppurative cholangitis antedating the operation.
2. Choledochotomy, 6; with 1 death from peritonitis due to perforation of the transverse colon, the suture of the duct having held.
3. Cœliotomy and loosening of adhesions about the ductus choledochus, 1.
4. Cystecotomy, 6.
5. Cholecystectomy, 5.
6. Cholecystendysis, 2; with 1 death from pneumonia, the suture of the gall-bladder being firm and there being no peritonitis.
7. Cœliotomy on account of mucous fistula, 2.
8. Exploratory cœliotomy, 3 (gastric carcinoma, 2; pancreatic carcinoma, 1).

*Translated by Dr. A. L. Benedict, Lecturer on Digestive Diseases, Dental Department University of Buffalo, for THE MEDICAL AND SURGICAL REPORTER.

9. Closure of biliary fistulæ, 4.

10. Opening of biliary abscesses in the abdominal wall, 2.

11. Reopening of closed biliary fistulæ, 6.

No deaths occurred except as noted. Of the 3 fatal cases only 1 was directly due to operation.

Kehr has arrived at the following conclusions:

1. Too few operations are performed for biliary calculi; early operation is important.

2. Many patients with gall-stones belong not to Carlsbad, but to the surgical clinic.

3. The public must be informed as to the danger of biliary lithiasis, and the physician must not delay a necessary operation.

4. The course of the sickness and the intensity of the symptoms often determine the necessity of an operation.

5. The urgency may be great, although icterus, enlargement of the liver and tumor of the gall-bladder are absent. The pains, too, need not be typical of hepatic colic.

6. With chronic stomach trouble, for instance, gastric dilatation, especially with so-called cramps of the stomach, the possibility of gall-stones and of hernia in the linea alba must be borne in mind. Many patients are treated for gastric ulcer when they have calculi.

7. Riedel's tongue-like projection is presented in many cases of dropsy of the gall-bladder. Not seldom there is a confusion with a floating kidney of the right side.

8. Biliary colic is often a consequence of an inflammation of the gall-bladder. The accompanying icterus depends on the swelling of the mucous membrane of the biliary passages.

9. Adhesions, particularly between the gall-bladder and the pylorus, occasion attacks similar to colic, even when the stone has long ago been discharged.

10. For the removal of stones from the gall-bladder, cholecystostomy is useful; if the operation is properly performed no fistula results.

11. Adhesions must be broken up so far as possible.

12. The ideal method, with its modifications, must be rejected.

13. Total extirpation is to be thought of only when there is serious involvement of the walls of the gall-bladder, as in carcinoma, ulceration, etc. It is not indicated by a stone lodged in the bladder. In the case of a small, shrunken organ, Riedel's or Lauenstein's procedure is not available and then cystectomy is indicated.

14. Calculi of the choledochus are to be removed by incision of the duct, as previously stated.

15. Calculi of the cystic duct must, under certain conditions, be removed by direct incision.

16. Operation is often less dangerous than medicinal treatment.

17. A return has never been seen by the author.

18. Operations for gall-stones must not be performed except in surgical institutes.

19. They should be undertaken only by one experienced in abdominal work.

Chloroform in Lead Colic.

Dr. F. MacFarlan, of New York City (*American Therapeutist*), remarks that he has had great success in the treatment of lead colic by the internal administration of chloroform. He gives ten drops every half-hour if required. The pain is speedily relieved by the drug. The other features of the treatment go on in the usual way, such as the use of potassium iodide and laxatives. The chloroform is decidedly more effective in relieving the pain than the morphia, as a trial of the two remedies will abundantly prove. The speedier relief also favors a quicker and more satisfactory recovery.

Relation of Tuberculin to the Blood Cells.

As the result of recent experiments, Dr. Maurel finds that tuberculin, in the doses in which it is already employed therapeutically, has no sensible effect upon either white or red blood cells. His experiments also show that human leucocytes are able to resist successfully the bacillus tuberculosis, and that it is only necessary to attenuate the bacillus to a slight degree to enable the leucocytes to destroy the microbe. The experimenter suggests that it is only necessary to discover some agent capable of doing this to cure one of the most dreadful maladies with which the human race is afflicted.—*N. O. Med. and Surg. Jour.*

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SATURDAY, FEBRUARY 2, 1895.

EDITORIAL.

THE GENESIS OF SERUM THERAPY.

Although of necessity brief and summary in character, a review of the origin and development of the treatment and prevention of disease by establishing artificial immunity will be useful, not only because of the intense interest aroused by the present investigations in the so-called anti-toxin treatment of diphtheria, but because the subject affords an excellent illustration of the persistent efforts made to raise medicine to the level of an exact science.

In the history of certain infectious eruptive fevers — small-pox, scarlatina, measles, etc.—three peculiarities have been constantly observed (conditions of exposure to infection, etc., being equal): (1) a limited number of individuals are proof against infection, *i.e.*, are naturally immune owing to some unknown personal quality; (2) a limited number of individuals cannot acquire immunity even by repeated attacks of the disease; and (3) the vast majority of individuals, readily susceptible upon exposure to infection, secure permanent immunity from repeated attacks of the disease by surviving a first attack, *i.e.*, are artificially immune.

During the last quarter of the eighteenth century Jenner, perfectly familiar with these facts, while investigating small-pox observed that those whose occupation brought them in contact with cattle were liable to acquire an analogous disease (cow-pox), which ran a very mild course in the human subject and which protected against the dreaded small-pox as thoroughly as did an initial attack of that disease itself. The results deduced from Jenner's observations have been one of the greatest blessings to humanity. He demonstrated the practicability of attenuating or modifying the small-pox virus by passing it through lower animal economy, eliminating its deadlier characteristics and returning for use in the human economy what it might contain of the beneficent to afford protection against

the disease which generated it. However, he could offer no scientific explanation for the phenomena produced, nor was a satisfactory theory advanced for three-quarters of a century.

Meanwhile the discovery of microbic agency in the process of fermentation had been made, whence have sprung the alluring theories of germs and their relations to disease.

Twenty-five years ago Pasteur discovered that the bacilli of chicken-cholera when exposed to the air for considerable time lost somewhat of their virulence and did not prove so fatal in effect as when fresh. Moreover, that chickens when inoculated with such modified virus were protected against the more virulent forms of the disease. Another discovery credited to Pasteur is that the microbes of a disease which belongs exclusively to a certain class of animals, although by no means destroyed, can be very much modified and the virulence abated by being transplanted to animals of different species. Pasteur likewise discovered that there was some substance in the spinal nerve tissues of a dog affected with rabies which would produce a form of disease even more virulent than the original; that this substance or virus could be so manipulated as to produce an extremely mild form of the disease, and finally a process was developed by which the system of an animal could be so trained and reënforced as to be invulnerable to infection with the most virulent virus produced. That is, the toxic element of the disease could be made to provide its own specific anti-toxin.

There are three prominent theories to account for the manner by which inoculation secures immunity. The first, and the one on which the anti-toxin treatment of diphtheria has been principally developed, is the one advanced by Behring and Kitasato. It assumes that the inoculation of the chemical poisons secreted by microbes during growth brings about a condition of tolerance in the body inoculated so that eventually it is prepared to withstand not only the effects of enormous doses of the poison in question, but also those of the very microbes producing the poison. This immunity is presumed to be due to the formation of an anti-toxin in the blood.

The second theory is based on the assumption that the part of the body in which any given germ flourishes is rendered sterile after it has borne a crop, so that afterward germs may be introduced with impunity, as they cannot take root and spring up.

The third is the well-known "phagocyte theory" of Metchnikoff—that is, the cells of the body become habituated by the milder form of the disease and are thus seasoned to resist attack from the disease itself. They become veteran cells, and like veterans can take care of themselves. In fact, they acquire the knack of swallowing and digesting the invading microbes.

It will be observed that the first-mentioned theory, which is also the latest to be promulgated, introduces an element which amounts to a radical innovation. The older theories assumed the presence of a specific microörganism as the immediate casual factor in the production of the disease. These hypotheses became untenable for a variety of reasons; one insurmountable difficulty being the failure to identify the predicated specific microörganism whose presence was required to be more than hypothetical. In many of the otherwise typical infectious diseases the keenest researches with the microscope and culture-tube have utterly failed to demonstrate any bacteria that can be alleged specific with a degree of plausibility.

About five years ago Salmon and Smith, of the Bureau of Animal Industry of the United States Agricultural Department, discovered that the metabolic products of bacterial energy when separated from the microörganisms themselves would secure

to the inoculated organism the same immunity as would inoculation with a living culture of bacteria. In other words, it was made evident that the immunizing agent was chemical in nature.

Another advance was obtained when the fact was recognized that there was considerable bactericidal power inherent in the blood of a healthy organism, due to a solution in the blood-serum of certain complex albuminoid compounds.

Pursuing this line of investigation, Behring "established the fact that the blood and blood-serum of an individual which has been artificially rendered immune against a certain infectious disease may be transferred into another individual with the effect to render the latter also immune, no matter how susceptible this animal is to the disease in question" (Krieger). The immunizing agent is the so-called anti-toxin.

Further investigation showed not only that an individual inoculated with it was proof against the toxins of the original disease, but that in an unprotected individual already infected with the original disease inoculation with the anti-toxin would neutralize the preëxisting toxins and cure the animal.

On these two observations hang all the loss and the profits of serum therapy.

It must be borne in mind that this is the barest outline of the subject and is in no sense a critical discussion. The results obtained were secured upon lower animals under the controllable conditions of a special laboratory and at the hands of scientists devoted to a specific and limited subject. The observations may have been correctly noted, and at the same time the field of observation may prove entirely too limited to justify the deduction of general laws from the observations made. In any event, there is a wide chasm between the rabbit in the bacteriological laboratory and the human sufferer among the sons of men.

ABSTRACTS.

SCARLET FEVER, WITH ESPECIAL REFERENCE TO CONTAGION AND PROPHYLAXIS.

Dr. Holyoke (Boston *Med. and Surg. Jour.*) writes:

Scarlet fever in recent years seems to be of a milder type than it was when I began practice more than twenty years ago. Its death-rate in this State is very much less now than it was then. Such variations in type have long been observed, and it is not impossible that severe forms of the disease may again visit us, although it is to be hoped that the continued good work of the health authorities will prevent any very destructive epidemic in the future. Still, this malady, in some form, is always with us; and in large cities it would seem almost impossible to eradicate it, fostered as it is by crowding, filth, ignorance and selfishness.

Besides the oversight of the health officers, the most hopeful means of limiting such diseases should be the influence exerted by the attending physicians. It is not sufficient that the individual patient be successfully treated, but the health of the community should be considered, and thosein charge of such cases be taught how these diseases spread and the best attainable means of prevention.

So far as we know, the virus of scarlet fever is, in most instances, taken into the system with the inspired air; but a number of cases have been reported from drinking infected milk, and we may assume that it is possible for it to gain entrance through any absorbing surface with which it can come in contact.

We are more practically concerned, however, with the origin and mode of dissemination of the virus, in order that we may deal with it at its source. It may be assumed that it is given off from all the surfaces of the body of the scarlet-fever patient. The most productive source is the desquamating cuticle; and when this is thrown off in the dry state and the fine particles are floating in the air, it is in a condition most favorable for reception into the system. In the moist state, as given off from the internal surfaces, it may not be such an immediate cause of danger, but we must believe that forcible expiration can dislodge contagious particles from the air-passages, which, either in the form of spray or dried and pulverized sputum, may be virulent even at an early stage of the sickness. It is possible that the urine and feces, if not disinfected, may contaminate the sewage and become a remote cause of trouble.

The most important means of preventing the spread of scarlet fever is isolation of the patient and the avoidance of all means by which the germs may be conveyed away until after they are disinfected. It is believed that the virus is not carried far by the air alone, although apparent exceptions to this rule have been noted. It is usually conveyed by persons or materials that have been in the vicinity of or in actual contact with the patient.

It is probable that scarlet fever, in most cases, is not very contagious during the first day or two; and if patients are separated as soon as the rash appears, those previously exposed will commonly escape. After this, however, it is certainly contagious as long as desquamation is going on, and although this may in some cases cease in three or four weeks, it usually continues longer and sometimes more than ten weeks. As a routine practice I advise isolation for six weeks from the beginning of the sickness, but sometimes find this period too short.

Our greatest difficulty is to secure proper isolation, especially among the poorer classes. During the height of the illness children are easily restrained, but when convalescence begins and they beg for liberty, it is difficult to impress upon parents the duty of restraint in the interest of public health. Another source of danger is the use, during convalescence, of books and toys which are not afterward destroyed and which cannot be completely disinfected. There is evidently much carelessness in this particular.

I will now report a group of cases which may serve to illustrate some of the points just noticed. In the early part of the present year a number of cases of scarlet fever occurred in the home of the Boston Children's Friend Society, on Rutland Street. The home contained at that time about 70 children, of whom, as nearly as could be determined, 55 had never previously had the disease. The first case appeared on January 17, 1894; others followed, at first in rapid succession, then at intervals of more than three weeks, when on February 10th there were 22 sick. After this there was a period of quiet for about six weeks, when 2 others appeared, on March 27th and 31st; and finally another one on May 1st, making a total of 25 cases.

For a little while we were in doubt as to the origin of the trouble, but in a few days reached the only conclusion which seemed to give a reasonable explanation.

At Christmas some persons connected with one of the Sunday-schools in Newton Centre collected from their scholars a quantity of second-hand toys and picture books, which were presented to our home. According to the reports in the daily papers, scarlet fever was then prevalent in that town, so that it became necessary to close some of the schools. From recent inquiry it is learned that the increase of scarlet fever in the town of Newton, including Newton Centre, began in November, when more cases were reported than during any other of the five months of its prev alence. The toys and books, which filled a barrel, reached the home on Rutland Street on January 2d, and were distributed to the children about eight or ten days later; and within another week the sickness began.

I have not attempted to trace the previous ownership of the toys. There would be manifest difficulty in doing so. But the facts that they were contributed by many persons in an infected district and that a few days after their reception by the children the malady appeared, make a strong probability that some of them were infected with the germs of scarlet fever. As soon as the toys and books were suspected they were collected and destroyed.

As cases of the disease continued to appear long after the destruction of the toys, we naturally inquire whether the later cases resulted from the original cause or from contact with the sick. In support of the first of these views we must remember that the toys and books had been in possession of the children about ten days. They had been widely scattered, and probably sufficiently handled to disengage many of the germs. It was impossible to fumigate the whole house, and it was not attempted except by burning sulphur in the play-room where the toys were first distributed. Therefore it was necessary to wait for the slow process of ventilation to remove the virus, which the cold weather rendered more difficult.

As soon as the children were taken sick they were at once separated, and their bedding and clothing removed and disinfected. The rooms occupied by the sick and their attendants were in a remote part of the building, well situated to insure isolation; and, as far as possible, all communication was cut off from the rest of the house. The management was so careful and the separation so complete that I consider it impossible that any should have become infected from this source.

We may now inquire whether it is probable that the disease continued to spread from contact with those recently affected before they were removed. In order to throw what light I can on this matter it will be necessary to examine the cases more in detail.

The children were divided into two classes, the so called school-children, over five years of age, and the nursery children, 10 in number, all under five years. I may say that the school was within the building.

The disease began with 2 children on January 17th, 3 on the 19th and 3 on the 20th. These 8 cases occurred in the older or school children, and all were undoubtedly produced by the original cause. Then, at intervals, in the course of the next three weeks, 8 more of the older children were taken sick. How these were infected may be a doubtful question. Some of them might have resulted from contact with incipient cases of the sickness, but I am inclined to believe that the original cause was still acting.

All the remaining cases happened in the nursery. The nursery children had received none of the suspected toys, and after the disease entered the home they were kept closely in their rooms and not allowed communication with the other children. But there was one exception to this. On January 24th one of these small children was allowed to leave the nursery for a few hours and mingle with the older ones in the school-room. Four days later he was taken sick. Eight days afterward another one came down, and I may mention that this child was troubled with a cough. From three to five days after this 4 others became ill, and then there was a long period of rest.

Of the cases just mentioned we need not discuss the first, in which there had been communication with the school-children. The second, occurring eight days later, is of doubtful origin; but there can be little question that the next four, following the second at intervals of three to five days, were infected by it. This seems more reasonable from considering the fact that the second child had a cough sufficient to dislodge contagious particles from the throat.

Three more cases remain to be noticed. Two of these appeared late in March and had been joined about a week before by several convalescent children, one of whom was found to be desquamating, although seven weeks had elapsed since she was taken sick. The remaining case appeared on May 1st, and the only explanation I can give is the following: One of those who had been affected was a girl aged twelve, whose sickness was severe and followed by prolonged desquamation. This was evident for ten weeks, but at the end of seventy-four days she was given an antiseptic bath and set at liberty. Her hair was long and thick. On the day she left the sick-room she went into the nursery, where only two children remained who had not had the disease. She also combed her hair with the comb used by those children. The visit was repeated a day or two later, and six days after her first visit one of the nursery children became sick.

Of the group of cases here reported the greater number may be regarded as due to circumstances largely beyond our control, but the last three could have been prevented by exercising more caution, although it may be said that the children who carried the infection were examined

before leaving the sick-room by a prudent and experienced person. These cases, however, emphasize the need of careful supervision of convalescents and tend to confirm the belief that many instances of scarlet fever result from neglect of this precaution or inability to carry it out.

In the way of prophylactic treatment many internal remedies have been recommended, both to the well, to prevent the development of the disease, and to the sick to prevent its spread. The most of these are such as have an antiseptic effect; and although we may be doubtful of their prophylactic influence on the general system, there can be little question that some of them have a very favorable effect on the mouth and fauces of the scarlet-fever patient, and probably render the secretions of those parts less virulent. Of those that may be classed as mildly antiseptic I still use, in most cases, the old mixture containing chlorate of potash and tincture of chloride of iron in small and frequent doses.

Since the most fruitful source of the germs is the desquamating cuticle, it is evident that the proper management of the skin is the most important part of the prophylactic treatment.

About twenty-five years ago Dr. Budd, of Bristol, England, reported excellent results from the application of olive oil as an aid to isolation. He usually combined a little camphor with the oil, and the application was made freely and often and continued until the patient was "well enough to take a warm bath." Then he was well scrubbed with antiseptic soap and water every other day until four baths had been taken, when the disinfection of the skin was regarded as complete.

Since that time most of the writers whose works I have examined mention the use of oil or ointments, either plain or containing antiseptics, but not all of them insist upon this measure as a matter of much importance; and as far as my observation extends, I do not think this method of treatment is used as commonly as its merits deserve.

Since the beginning of my practice I have always used olive oil as a remedial agent during the height of the sickness; but for some years past I have ordered it very freely throughout the whole period of illness and until desquamation has ceased, for the purpose of preventing the escape of the scales bearing the germs. There may be some advantage from combining antiseptics with it or from using thicker ointment on the hands and feet when the patient is up; but I have been so well satisfied with the use of the plain olive oil that I still continue it, and its simplicity and ease of application are qualities that also recommend it. Much depends on its thorough and long-continued use; and as many of our patients are seen only a few times, it is necessary before ceasing attendance to give explicit directions for the future management of the case. The treatment can be best carried out if the patient remains in bed for a prolonged period; but whether in bed or up, much care must be used when the clothing is removed. Nothing should be scattered about the floor, but all materials carefully gathered in a sheet and placed at once in the receptacle for disinfection. After getting up the hands should be well cleansed and constantly anointed, and I have known some mothers to keep the patient's hands wrapped in cotton cloths to prevent the scales from escaping.

Since adopting the measures here mentioned, my impression is that the disease is much less contagious than before. I have kept no records of cases, but those of recent date can be recalled, and I remember none in private practice within the past year when it spread to any other person after my first visit, even when isolation was impossible. Such results may be in part accidental, but I will mention some of the cases to show the extent of exposure.

CASE I.—Family containing five children between the ages of one and eleven years, none of whom was protected by previous attack. Two of these were taken sick at the same time, and at my first visit the rash was just appearing. In one the sickness was moderately severe, in the other very mild. It was impossible to keep the other children out of the sick-room, and the mother took care of them all. Three other susceptible children in the same house were occasional visitors, but none became affected.

CASE II.—Family containing five children who had never had the disease. Ages two to twelve years. One of these, aged six years, had a moderately severe attack. Rash quite abundant. Patches

on tonsils. He was kept in a separate room, but the other children were on the same floor, and the mother took care of all. No other case occurred in the family.

CASE III.—Family of three children who had never previously had the sickness. Ages six to ten years. The youngest had a severe attack with abundant rash. One of the others slept much of the time in the sick-room, and they were all taken care of by the same person. The two older ones remained well.

CASE IV.—Family containing four young persons who had never had the disease. The youngest, aged eight years, became affected. Rash well marked. Isolation was impossible. The others were frequently in the sick-room, and a woman living in the same house, mother of two small children, often visited the sick boy. No other case of the sickness occurred.

Other recent cases with a like result could be reported, but I have selected those in which there was the greatest exposure of susceptible persons.

It may be said that scarlet fever at the present time is of a mild type and not very contagious; but the group of cases first mentioned tends to show that under certain conditions the disease may be taken now as readily as ever.

DEATH-RATES AND RACE.

I will not weary you with further details of figures, which those of you who are specially interested in the subject will find in the reports of the vital statistics of the eleventh United States census, but will merely say that the corresponding data from Boston, Philadelphia, Baltimore, Washington, and from the New England States as a whole, taken with those from New York State and New York City and with those derived from a special investigation of over 10,000 Jewish families, including over 50,000 persons, lead to the following conclusions as being probable for the United States:

1. The colored race is shorter-lived than the white and has a very high infantile death-rate; it is specially liable to tuberculosis and pneumonia and less liable than the white race to malaria, yellow fever and cancer.

2. The Irish race has a rather low death-rate among its young children, but a very high one among adults, due to a considerable extent to the effects of tuberculosis, pneumonia and alcoholism.

3. The Germans appear to be particularly liable to disorders of the digestive organs and to cancer.

4. The Jews have a low death-rate and a more than average longevity; they are less affected than other races by consumption, pneumonia and alcoholism, but are especially liable to diabetes, locomotor ataxy and certain other diseases of the nervous system.—*Dr. J. S. Billings in Med. Rec.*

A NEW SYMPTOM OF CANCER.

G. Bogdan (*Brit. Med. Jour.*) relates the case of a woman, aged forty-eight, who suffered from cancer of the stomach. The disease had gone through a long period of latency. The patient presented on each cheek a patch of wine-red discoloration formed by the dilatation of the superficial venules; the stain showed out sharply against the pale yellow of the surrounding skin. On the strength of this symptom alone Bogdan was able to make a diagnosis of probable cancer at a time when there was yet no other manifest sign of that affection. He looks upon such superficial varicosities on the cheeks as a valuable help to the early recognition of certain cancers; he has seen it in about two-thirds of the cases of cancer which have come under his observation; it is particularly frequent in cases of epithelioma of the stomach and uterus, but less common in malignant disease of other organs.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

BUFFALO MEDICAL AND SURGICAL JOURNAL.

Dr. George F. Cott writes of

The Surgery of the Accessory Sinuses.

Inflammation of the sinuses is apt, he says, to be mistaken for ozena, and this is excusable when it occurs in a case of acute nasal catarrh, but when chronic it may be readily recognized.

The posterior ethmoidal and sphenoid cells open by one or more foramena into the superior meatus; the frontal sinus, the anterior ethmoidal cells and antrum of Highmore into the middle meatus; the nasal or lachrymal duct into the inferior.

In disease of the frontal sinuses headache is more or less constant, and in addition if the pus is not free to escape the roof of the orbit will be subject to pressure, causing displacement of the eyeball, amaurosis and diplopia.

If pus escapes it is bright yellow and it will be found issuing from the infundibular opening in the middle meatus by cleansing the parts with swab or spray and then applying cocaine solution.

In acute cases the ordinary treatment for the nasal affection is sufficient, but in chronic cases it is necessary to remove hypertrophied tissue from the middle turbinated bone, or even to remove some of the bone to give free exit to the pus. In some cases it is necessary to make an opening over the inner angle of the eye, to thoroughly clean the sinuses, and to pass a probe through the infundibulum into the middle meatus, followed by washing and by packing with gauze.

When the sphenoidal sinus is at fault, bright yellow pus is found dripping into the pharynx from an opening above and posterior to the middle turbinated bone. Deep-seated pain involving all the distribution of the fifth nerve is sometimes very severe. Pressure on the optic nerve may cause impaired vision or sudden total blindness.

When unrelieved the pus is apt to lead by pressure to ptosis, strabismus and exophthalmos and to affect the bony structures.

The treatment consists in removing obstructions and in opening the sinus by electric or dental engine, aided in every case by the rhinoscope. The operation is of course delicate on account of the danger of penetrating the brain.

The sinus being opened, dead bone and degenerated tissue are to be thoroughly scraped out.

In cases of ethmoidal involvement, if the secretions are retained, the following symptoms develop: Pain referred to the back of the eye and the root of the nose, impaired sense of smell, pus containing gritty particles from the broken-down bone. When the pressure of the pus is great enough the bone gives way, and a swelling may be found at the inner angle of the orbit and crepitation is found on pressure there.

The treatment consists in removal of the anterior part of the middle turbinated bone, exposing the opening into the ethmoidal cells.

The cavity is then washed or may require to be scraped and the nose packed with gauze or wool. As in sphenoidal disease, the operation requires dexterity.

In disease of the antrum of Highmore there are pain and a sense of fullness and weight below the orbit, and if the destruction last long the pain may become very severe. Difficult mastication, with a feeling as though the teeth were too long, may be noticed. At night pus may be felt running back into the pharynx, but in the upright posture is discharged from the nose.

The modern means of diagnosis is the use of the incandescent lamp. A small lamp is placed in the mouth, the lips are closed, and the room is then darkened and the current turned on. The presence of pus in quantity is shown by obstruction of the light.

The treatment is puncture through the inferior meatus or, better, through the alveolus if a tooth be missing. If carious bone be found, it will be necessary to make another opening with drill and chisel, clear the antrum and pack with gauze. Otherwise daily syringing will be sufficient.

Dr. A. L. Hall writes of the

Home Treatment of Hay Fever.

Hay fever is, he thinks, due primarily to a condition of neurasthenia, and the proper mode of treatment lies in combating this condition. The irritable respiratory apparatus responding to the pollen of plants is secondary in etiological importance.

Some cases are detailed in which treatment on these principles has enabled the patient to remain at home and yet escape without very great discomfort.

A prescription in which the author places considerable reliance is the following:

Liq. potass. arsenitis	
Ext. nucis vomicæ fluidi	ää ʒ ij
Ext. cinchonæ fluidi (detannated)	
Alcoholis	ʒ iij
Syr. aurantii	q. s. ad. ʒ xvj

M. Sig.: ʒ j or ʒ ij t.i.d., with or after meals.

The use of this preparation for at least six weeks before the annual appearance of the disorder and its continuance during the three months following is declared necessary.

Dr. A. L. Benedict writes of

Atonic Dyspepsia.

The term, he says, fell into disrepute for a time and was regarded as indicating imperfect diagnosis on the part of any one using it. Sometimes, however, after thorough study

of a case this term seems the most suitable description. Pepper recognizes the expression and applies it to a condition causing a large, flabby, tooth-marked tongue, not necessarily coated, sense of weight in the epigastrium, development of flatus, sluggish bowels, urine loaded with urates, etc.

It is improbable that there will be lack of nourishment if digestion be perfect, and the distention of the stomach is not so much due to muscular atony as it is to fermentation by micro-organisms and due to lack of hydrochloric acid.

Many healthy persons masticate imperfectly, and this fact should more than offset the want of muscular churning movements in a case where the food eaten was soft.

In atonic dyspepsia the lack of hydrochloric acid leads to insufficient digestion of proteids, therefore delayed absorption and sluggishness of the muscular movements of the stomach and the intestines.

In the irritative type the ptyalin digestion of carbohydrates is inhibited by the excess of hydrochloric acid, and the irritation caused by this excess may lead to gastric ulcer. "In high grades of acute gastritis, in the late stages of cancer and of chronic catarrh, and at the approach of death in any disease there may be a scarcity of pepsin, but under these conditions only. There is therefore no excuse for the administration of this ferment except in those cases which are better treated by the use of predigested food."

The ultimate cause of atonic dyspepsia is constitutional depression due especially to prolonged worry. It is often the first symptom of tuberculosis. Once established it leads to increased depression.

Physical examination will show the stomach relaxed, perhaps, and sagging below its normal level, but it is not dilated. Chemical examination of the contents is important, and the writer does not think a complete diagnosis possible if this be neglected. Moderate acidity will usually be found, but the hydrochloric acid is so reduced in amount that frequently it is not evident from the use of ordinary tests.

The treatment the author advocates is the administration of well-diluted hydrochloric acid. Usually from six to twelve minims of the officinal dilute acid may be given an hour after meals. If more is necessary, it may be given well diluted at short intervals at about the same period of digestion.

Since hydrochloric acid is formed from the chlorides ingested common salt should be freely used, but the author declares the use of pepsin a sign of ignorance.

To stimulate secretion and absorption strychnine may be given before meals. Hot water is also beneficial, and if a small quantity of soda be added it will serve the additional purposes of washing away any accumulated mucus and increasing the formation of acid.

Mention is made of a favorite application: the use through the stomach-tube of a spray of an oily solution of menthol, which the author has found very beneficial.

In the discussion of this paper the question arose whether lactic acid occurs normally during digestion. The author had found a substance which responded to the ordinary tests present in every case examined, and apparently most markedly present at the end of the first hour. Another speaker quoted Boas' belief that when lactic acid occurs cancer is present.

Another member present thought a properly chosen diet was of more benefit than medicine, and in choosing this cautions his patients to avoid the skin of all fruits and vegetables—grapes, apples, etc.—and regards cabbage as in the same list.

Fresh meats, fish, eggs, milk, stale bread, etc., constitute his main reliance, and he feels great confidence of successfully treating any case in which this diet is adhered to.

Dr. Wm. Redin Kirk writes of the "Constitutional Treatment of Diseases of the Female Sexual Organs" (mainly by a proprietary mixture).

Tea as a Possible Source of Plumbism.

The source of lead in most cases of plumbism is easily found. In districts where home-made wine is plentiful, the plumbism can be found due to the glaze of the earthen pots in which the wine stands for some days. In 15 cases carefully investigated, 6 were due to the wine. In 5 the tea contained lead—no other source could be found. In 2 wine was a possible source, but tea which contained lead was the more probable. In 2 no cause could be found, but the tea drunk before the illness could not be excluded.

In 1886 cases of plumbism in Odessa were traced to tea packed in lead-lined chests. The lead may be mechanically rubbed off from the chest lining. The lead lining may be acted on by the tea fermenting inside or from the chest being made of green wood. Carelessness in packing is another cause—traces of copper and chips of lead paper have been found in several small packets of tea. Infusion of tea, upon experiment, has been found to have a powerfully solvent action upon lead; in this way chips of lead paper are a danger. Of 22 different kinds of tea, 17 contained lead; 1.375 mlgms. of lead per pound was the smallest amount found and 18 mlgms. the highest. The average of all contained 5.962 mlgms. per pound. It was most unevenly distributed—of two packets of the same brand bought at the same time in the same place, one contained 1.6 mlgms. per pound and the other 18 mlgms. How far small doses are dangerous is difficult to state. One case is said to have been poisoned where only 1-357th grain of lead per gallon was found. Water containing 1 20th grain per gallon should be considered dangerous. Tea containing 6 mlgms per pound (the average of all the estimates) is equal to water containing 1-77th grain per gallon. Tea containing 18 mlgms. per pound equals water having 1-25th per gallon. Tea containing such quantities may cause plumbism in susceptible individuals, and would greatly increase the dangers from other sources, as water or home-made wine.—*Lancet.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Virchow on the Serum Treatment of Diphtheria.

The Berlin correspondent of the *British Medical Journal* writes that Virchow gave his opinion with characteristic caution. He said that he had been inclined to be skeptical as to the good results obtained in diphtheria last summer in the Kaiser and Kaiserin Friedrich Hospital, as he thought none of the cases was of the severest type. In August, however, the supply of antitoxin fell short, and since then the mortality from diphtheria in the hospital had risen remarkably, showing that the epidemic was severe in character. He summed up his opinion as follows: The serum exercises a strong protective influence for weeks, perhaps months, say three or four months. Whether this influence be lasting can be shown only by further experience. Moreover, this alone can furnish the answer to the cardinal question, Is it a specific for diphtheria? But much has already been gained when, for instance, it is possible in a family where three or four children are down with diphtheria to immunize even one child, and this, in all probability, can be done by the serum.

Antiseptic Mouth Wash.

E. Maurel (*La Med. Mod., Gaillard's*) presents the following formula:

Alcohol	ʒ ij
Tincture of eucalyptus	ʒ v
Tincture of cinnamon	ʒ ijss
Tincture of rosemary	ʒ j¼

M. Sig.: A teaspoonful to a glass of warm water.

Treatment of Seborrhœic Eczema in Children.

Feulard (*Jour. des Prat.*) observes that attention must be given in the first place to the diet, which should be limited to milk, with the addition, in older children, of eggs. In the local treatment the first step is the removal of crusts, which may be effected by using warm coal-tar lotions, preceded, if necessary, by poultices. After the crusts have been removed he uses gauze compresses soaked in a solution of resorcin (6 in 1,000). These are kept constantly applied to the scalp by day and are applied frequently to the face. By night an ointment is used, consisting of one part of balsam of Peru to thirty parts of vaseline. Later he uses fine starch powder or a powder consisting of equal parts of starch and carbonate of bismuth. Recovery is rapid if the instructions as to diet are strictly observed and the dressings used with regularity.

Hints on Treatment of Diabetes.

Dr. Solomon Solis Cohen, writing on the different forms of diabetes mellitus, gives this suggestive advice with respect to treatment: Examine the urine frequently, and administer alkalies freely if this excretion be too acid or if the sugar have diminished suddenly. As constipation is a precursor of diabetes coma, it must be prevented by giving phosphate of sodium in doses according to the effect produced. This may be combined with 1-64 grain of arseniate of sodium, a useful expedient. Strontium bromide in doses of twenty grains may be given in cases of diabetes in the gouty and obese. It is a stomach tonic, promotes digestion, relieves flatulence, increases general nutrition, and keeps the blood moderately alkaline. Strontium lactate can be alternated with the strontium bromide. From time to time arseniate of strychnine, 1-128 grain six times daily, is given as a general nervous tonic and stimulant. Dr. Cohen believes in codeine; and, following Sir Benjamin W. Richardson, he gives it in solution with hydrogen dioxide. Thus:

Codeinæ phosphatus	grs. ij
Spiritus rectificati	drams iv
Acidi phosphorici diluti	drams ij
Glycerini	drams vj

Solutionis hydrogen dioxidi (10 vol.) ad ounce of misce.

Two teaspoonfuls to be taken in three ounces of water.

With this is enjoined an alkaline course, arsenic being sometimes added. Hydrogen dioxide, ozonic ether and oxygen have been advocated on the presumption that they bring about increased oxidation of the sugar or ·condary products circulation in the bloo Dietetic treatment of course precedes medic ion. Don't try to cut off bread and potatoe together. Gluten bread is not reliable and not palatable. Try to make up by fats for the exclusion of the starches. Keep your patients warm and protected; cold is their greatest enemy. Examine the urine for organic acids and keep the blood alkaline. In the matter of diet be strict enough to diminish polyuria and glycosuria, and if possible secure their disappearance, provided you can at the same time keep the patient comfortable, but under any circumstances make the patient comfortable.—*Ther. Gaz.*

Morning Diarrhœa and Its Treatment.

Dr. P. L. Brunton (*Med. Week*) considers the special form of diarrhœa which occurs in the morning as due to a chronic state of irritation or congestion of the sigmoid flexure or of the rectum. If this congestion is too frequently repeated, it is gradually changed into an inflammatory condition which may ultimately result in the production of intestinal ulceration. In this form of diarrhœa

the region of the sigmoid flexure is very tender. On palpation the intestine is frequently found to be contracted to a thick, hard band.

As the capital point in the treatment of this affection is mentioned absolute abstinence from the ingestion of liquids of any description for a period of from twelve to fifteen hours preceding the moment at which the diarrhœa usually appears, that is to say after five or six o'clock in the evening. The most that should be permitted, if the patient suffers greatly from thirst, is a few mouthfuls of liquid. During the day beverages may be allowed, but only in moderate quantities. In addition, the irritability of the intestine is to be allayed by the administration of bismuth subnitrate and sodium bicarbonate. In obstinate cases, it is stated, massage may be advantageously employed.

Intrarectal Application of Ice.

Drs. Pasterunatzky and Koulbine (*Sem. Med.*) are reported to have successfully resorted to the intrarectal introduction of ice in the treatment of excessive hemorrhoidal bleeding, in rectitis, weakening of the anal sphincter from persistent diarrhœa (sometimes followed by rectal prolapse), ulceration and cancer of the rectum, and, finally, collapse due to poisoning by opium, morphine, chloroform, alcohol and analogous substances.

The pieces of ice should have a conical shape and a length of 20–30 cm. (8–12 in.). They melt in the intestine within four to five minutes. From two to ten, and even more, may be introduced daily.

These intrarectal applications of ice for a moment produce a rather disagreeable sensation, accompanied with contraction of the sphincter; but, on the whole, they are usually well tolerated, it is stated. They exert upon the intestine a hæmostatic, antiphlogistic and sedative influence, and constitute a very prompt palliative remedy against false labor pains, pain in the rectum and other annoying sensations often felt in that region (such as burning, prickling, intense pruritus, throbbing, heaviness, etc.). With febrile patients they bring about an abatement of the fever and ameliorate their subjective condition. By reflex action, finally, they stimulate the heart and respiration, and also increase blood-pressure, which explains their beneficent action in collapse.

The Cure of Inebriety.

The drunkard is curable in at least one-third of the cases. The basis of cure is forced and prolonged total abstinence, which should be instituted at once Delirium tremens does not result from suddenly stopping the alcohol; its only results are headache, malaise and sweating. The treatment should be undertaken only where the patient may have calm surroundings and a military discipline; some drink, which will quench the patient's thirst and give him pleasure, should be substituted for the alcohol. Treatment should last at least for one year, and before it is terminated the force of the patient's resistance should be tried. When the treatment is concluded some moderate surveillance should still be exercised. If a certain trade or profession has been a causative factor it should be abandoned.—*Marandon de Monytel in Annal. Med. Psych.*

Dental Manifestations of Gout.

Kirk (*Lancet*): The coexistence of certain forms of suppurative gingivitis and gouty diathesis has long been known. Dr. Peirce, of Philadelphia, has shown that the calcareous deposits taken from the roots of teeth lost from pyorrhœa alveolaris contain, besides the usual calcium carbonate, considerable uric acid and urates of calcium and sodium. He concludes that the deposits upon the roots of such teeth are not salivary, but hemic in origin, and that pyorrhœa alveolaris is simply a local manifestation of gout. As further evidence of the correctness of these conclusions, the author has found that after thorough local treatment the gingivitis will disappear and have no tendency to return. He has found a marked acidity of the secretions of the mucous glands of the mouth in such cases, which brings about local decalcification of the enamel. He first used cream of tartar to correct this acidity. He afterward had a lithium tartrate prepared, which gave much more satisfactory results than any other alkali used. The promptness with which it acts is sometimes astonishing. After three doses of five grains each all symptoms sometimes subside.

Morphinomania in the Medical Profession.

Dr. Jules Rochard, in the *Union Medicale*, draws a gloomy picture of the increase of the morphine habit in France and elsewhere. The habit, he finds, becomes incurable at the end of six months of indulgence. The fair sex and the doctors are, in his opinion, the most deeply addicted to morphine. He draws an unpleasant comparison between the behavior of each kind of delinquent. Women, he says, delight in declaring how they indulge in this vice, and show ornamental hypodermic syringes to their friends. Dr. Notet states that a lady having broken the needle of her syringe in a remote country village, wounded her skin with scissors and thrust the stump of the needle into the wound, injecting herself in this manner till a new syringe arrived from Paris. Men, Dr. Rochard declares, and especially medical men, the bulk of male morphine injectors, take the greatest pains to hide their vice. Hence the precise number cannot be estimated. He believes, however, that doctors and persons associated with them form nearly half the total of men addicted to morphine.—*Med. Rec.*

Breakfast for Chlorotic Girls.

Dr. Carl Von Noorden, in the *International Medical Magazine*, speaking of the dietetic treatment of chlorosis, says: "Most chlorotic

girls feel weakest and worn out during the hours of the forenoon and incapable of any proper kind of work. This condition is uncomfortable and directly harmful from the educational point of view. The best remedy is the English fashion of a good hearty meal at the beginning of the day. Chlorotic girls are advised to drink half a liter of milk of the best quality while still in bed, and to do it very slowly, taking fifteen minutes to drink the quantity prescribed. Half an hour later they should rise and be rubbed with a dry, rough woolen towel. Then comes the breakfast, consisting of a small cup of tea, one or two slices of buttered toast and plenty of meat. Two hours and a half later some bread and butter is to be eaten, together with two eggs, this to be followed by a quarter of a liter of milk. A glass of sherry is now permissible if special reasons warrant it. This morning regulation of diet makes the forenoon hours quite comfortable. Fixed rules for other meals are of less importance."

Diet in Gout.

A. Bogdanoff has studied in Professor Obolenski's clinic the influence of animal, mixed and vegetable diet in four patients, three of whom suffered from gout and the fourth from round ulcer of the stomach. The latter patient was given only milk as a food. The mixed diet was found to cause the greatest daily excretion of urine and of uric acid. The specific gravity was between that of the urine in vegetable and that in animal diet. The body-weight increased most under the influence of vegetable diet, diminished under mixed diet and fell greatly under meat diet. In the fourth patient, although the daily quantity of urine was as great, with a slightly acid reaction, the quantity of uric acid was small. The author concludes from these experiments that the diet of gouty persons should not be heavy, but nourishing, and tending to increase the number of white-blood corpuscles. For this purpose mixed diet answers best. Pure meat diet acts badly from a psychical standpoint, frequently causing a great antipathy to meat, a tendency to eat little and to drink less, and in this manner diminishing the quantity of urine considerably. Constipation is also often observed.—*Jour. Med. and Hyg.*

Tannigen, a New Intestinal Astringent.

Meyer (*Deutsche med. Woch.*) calls attention to the inefficiency of most astringents upon the lower bowel because of their destruction in the stomach or upper bowel, the large dose in which they must consequently be exhibited, and the deleterious effect of this large dose upon the stomach itself. The new compound is a pentacetate of tannin. It occurs in yellowish-gray powder, is tasteless and odorless and is slightly hygroscopic. It can be heated to 330° F. without change. It is insoluble in cold water and only slightly soluble in hot water. The action of this drug was first tried on cats. It was found that relatively large doses could be taken without interfering with the stomach in any way, and that it had a decidedly constipating effect.

Muller (*ibid.*) has tested "tannigen" on some of his patients, with the following results: The patients take the powder without any ill effects either upon the appetite or the stomach. The drug was so harmless that a definite dose was not ordered, but a knife-pointful was directed three to eight times daily. It was used in chronic diarrhœa, chronic intestinal catarrh, in some cases of recurring dysentry, and in cases of intestinal disturbance in phthisical patients. In most cases the number of stools was decreased on the day after the drug was begun. In some, as in phthisical cases, the good results lasted only so long as the drug was continued. But as soon as the drug was again commenced the diarrhœa stopped. Some of the patients took the drug for several weeks without ill effects or lessening of the good effects. The drug was also tried in a small epidemic of acute diarrhœa, and the disease in all the cases was brought quickly to an end. In the acute and subacute diarrhœas of children the drug is valueless except the diet be changed. It is also without good effect in the atrophic cases of nursing infants. He concludes that it is of most value in chronic diarrhœa and is actually curative in these cases. He thinks that it is also of great value in the diarrhœa of phthisical patients, where it can be given for a long while and will not interfere with the appetite or digestion.

SURGERY.

Cream of Tartar in the Treatment of Gonorrhœa.

Dr. Oteri (*Jour. de Med. de Paris*) has employed the cream of tartar in 280 cases of gonorrhœa, bubos, chancres and operations on the prepuce. On account of its mild action it is of service in urethral injections, even to five a day. It subdues the inflammation and arrests the discharge. It is possessed of eminent antiseptic and absorbent properties. In profuse suppuration in wounds or cavities with sinous or necrosing walls it will yield good results if applied locally. In bubos, chancres and syphilitic ulcerations, as well as in balanitis, he has found it a good local application. It is cheap, devoid of odor, painless and easily handled.

Abscess of the Hand as a Complication of Gonorrhœa.

As a recent contribution to the long list of complications of gonorrhœa which have been shown to be due to the presence of the gonococcus in the remote lesion, we have the report of a case by Horwitz (*Wein. Klin. Woch.*), in which a young man, twenty-seven years of age, who had suffered from gleet for a year, was affected by an abscess on the back of the hand. Examination of its contained pus showed the presence of the gonococcus of Neisser, both microscopically and in cultures.

In a carefully compiled introduction Horwitz reviews the cases of a similar nature which had been published up to the time of his writing.

Electric Effluvation for Chronic Leg Ulcers.

Dr. Marquant (*Med. Week*) has obtained excellent results from static electricity in the treatment of chronic leg ulcers, especially those of a varicose character. The method employed, which was originated by Professor Doumer, of Lille, is as follows: The sore is first washed with an antiseptic solution (perchloride of mercury or carbolic acid in feeble proportions) and then covered with a thin layer of absorbent cotton. The patient is placed on an insulating seat and connected with the negative pole of an electrostatic machine. The electrode is then approached to the sore, keeping it, of course, sufficiently far away so that no sparks are discharged, though near enough for the production of the electric souffle or wind. The effluvation is continued for ten minutes, after which the wound is dressed. The sittings are usually repeated three times a week.

The dressing used for the patients treated by Professor Doumer and Dr. Marquant consisted at first in sprinkling the sore with powdered subcarbonate of iron and covering it with aseptic cotton; but later on the carbonate of iron was suppressed and a simple application of absorbent cotton-wool resorted to. As this dressing is only renewed twice a week, the effluvation is practiced once in every three times through the layer of cotton, which, therefore, should be as thin as possible.

Treatment of Contusions and Lacerations of the Urethra.

Dr. Reineking formulates the treatment as follows:

1. Make careful attempts to introduce a soft catheter, and if successful leave it in place for five or six days, irrigating the bladder daily with boric-acid solution. After that time the reintroduction, if necessary, will generally be easy.
2. Avoid metallic or other stiff instruments; this will also do away with the necessity of general anæsthesia for purposes of catheterization.
3. When a soft catheter cannot be introduced, an external urethrotomy should be performed. It should be done at the earliest possible time, so as to avoid extravasation of urine and infection of the peri-urethral tissues.
4. If for any reason a urethrotomy cannot be done, we have in supra-pubic puncture a safe, efficient and easily executed procedure for purposes of temporary or even permanent relief.
5. As a substitute for puncture, supra-pubic cystotomy may be resorted to.—*Milwaukee Med. Jour.*

Gunshot Wounds of the Intestine.

In an article on this subject Dr. Hefeelfinger in the Texas *Courier-Record* draws the following conclusions:

1. Laparotomy is the only rational procedure in all cases of gunshot wounds of the abdomen where there is reasonable evidence that the ball has entered the abdominal cavity, and each moment's delay will materially lessen the chances of recovery.
2. If there is a reasonable doubt as to whether or not the ball has entered the abdominal cavity, give the patient the benefit of that doubt by doing an early exploratory operation for diagnostic purposes.
3. In wounds of the pancreas complicating gunshot injuries of the intestine a resection of this gland may be done, care being taken not to include the head or common duct, as death invariably follows such procedure.
4. The segmented catgut rubber ring being unaffected by the imbibition of intestinal secretion is one of the very best aids in circular enterorrhaphy or lateral anastomosis.
5. A ring composed wholly of catgut is entirely worthless as an intra-intestinal support on account of its highly absorbable qualities.
6. When the Lembert stitch includes only the serous or a part of the muscular coat they do not, as a rule, ulcerate their way into the bowel, as is claimed by some, but usually become encysted and remain near their place of introduction.
7. An intestinal wound when properly treated usually becomes securely sealed in from six to twelve hours by the formation of plastic peritoneal exudation; but this must not be too confidently relied upon, as it may be very materially retarded.
8. If there arise evidences of suppurative peritonitis, do a second abdominal resection, disinfect the cavity and apply drainage.

Cancer a Local Disease.

The evidence for this doctrine has been strongly presented by Dr. Jennings, in his work on "Cancer and Its Complications," the second edition of which has been recently published in London. If cancer be a local disease, it is imperative that not only those tissues which are seen to be subjected to cancerous infiltration, but some of the surrounding tissues and the neighboring lymphatic glands should be taken away by means of the knife at as early a date as possible. The amount of personal observation given in support of this method of treatment is not very great, but the careful analysis of the work and opinions of others and the comparison of the methods of termination of the disease under different methods of treatment amply warrant Dr. Jennings in drawing very wide and general conclusions.—*Brit. Med. Jour.*

New Observations in Gonorrhœa.

At the recent meeting of the German Dermatological Association considerable time was devoted to the discussion of the etiology

of gonorrhœa, and among the interesting points brought out, an observation by Wertheim is deserving of especial attention. This careful investigator has found that gonococci obtained from the secretions of chronic gonorrhœa can be cultivated so as to acquire a high degree of virulence, and when inoculated in the urethra of the patient from whom they were derived will give rise to an intense gonorrhœal inflammation. It has been quite frequently observed that patients suffering from latent gonorrhœa at the time of marriage have infected their wives, and at a later period acquired from them in return an acute urethral inflammation. Wertheim's experiments are, therefore, of importance in affording a rational and scientific explanation of this clinical observation.—*Inter. Jour. of Surgery.*

Antiseptic Treatment of Burns.

Wilbouchewitch (dissertation, Paris) concludes an article with the above heading in the following wise:

1. Fresh superficial burns, as well as deep ones, can heal under antiseptic treatment without the production of pus.
2. If pus is produced the wound is disinfected, and the course remains the same as if non-infected. But if the pus is of long standing and the wound begins to granulate, then disinfection is not possible.
3. To disinfect widespread burns an anæsthetic will often be necessary, and to this end chloroform is best suited.
4. If the wound is non-purulent the unnecessary use of an antiseptic hinders the healing process.
5. Antisepsis is the best analgesic.
6. Burns heal rapidly under the antiseptic treatment. Burns of the second degree require eight days; of the third degree, from two to three weeks.
7. Burns of the second and third degree heal without trace remaining; of the fourth degree, cause a scar, which does not retract, while this will be smoother the less the amount of pus.

Pott's Disease in Children.

Pott's disease in children is so often recognized so late in its course that all hope for improvement is futile. The early symptoms and signs which should always be looked for are laid down by Dr. Dillon Brown in the *Archives of Pediatrics* in the following list of different points:

1. The pain, general disability and sickness are out of proportion to the apparent amount of spinal disease.
2. The onset is alarming and the progress of the disease more rapid than in tubercular caries—the paralysis being an early symptom and the deformity appearing even in a few weeks after the beginning of the symptoms.
3. The local pain is intense; and the peripheral pains, the deformity, the extreme spinal disability and paralysis, including incontinence of urine and feces, rapidly grow worse in spite of rest in bed and instrumental support.
4. Secondary disease soon appears, rapid emaciation and marked cachexia are seen, and the patient does not live more than six or eight months.

Whether a vertebral caries is due to syphilis or to tuberculosis is of immense importance as regards prognosis and treatment. In both diseases the symptoms are almost identical, and the diagnosis must be based upon the history, the presence or absence of other evidences of syphilis and the result of treatment. In tuberculosis there is more likely to be an evening rise in temperature, and the pus and debris may contain tubercle bacilli. Syphilis is suggested by nocturnal pains and the involvement with chronic disease of some other joint or joints or some other part of the spine.

Double Suppurative Orchitis, Causing Peritonitis and Death.

Hornus (*Centralblatt fur Chirurgie*) reports a very unusual case in which a soldier without having received an injury, without gonorrhœa, mumps or any other preceding disease, was suddenly attacked by an acute double suppurative epididymitis and orchitis which spread up the spermatic cord to the peritoneal cavity. Suppurative peritonitis followed with death in five days from the onset of the trouble. At the autopsy the testicular substance was found to be replaced by pus. It should be mentioned that at the time there were some cases of mumps in the same barracks.

GYNECOLOGY.

The Treatment of Inflammatory Diseases of the Pelvis.

In a paper on this important subject Dr. J. Henry Carstens, in the *American Journal of Obstetrics*, speaks strongly in favor of conservative treatment and urges the necessity of proper treatment by the general practitioner, who is usually the first to see them. He closes in the following words:

1. Let the general practitioner most conscientiously and carefully treat gonorrhœal infection in women.
2. Let the family physician and obstetrician most carefully manage confinements aseptically, and in the treatment of miscarriages be most thorough and not trust the vis medicatrix naturæ, but carefully clean out the uterine cavity.
3. Girls or young women who have leucorrhea and pelvic pain, the result of accident or not, should be most carefully and early treated before mischief has been done.
4. In cases of acute inflammation judge each by itself. If the symptoms are mild, palliative treatment with absolute rest will be proper and an operation can be performed later.
5. Cases of six or eight weeks' standing with sepsis should be operated on promptly.

6. When operating try and remove all diseased tissues if you expect your patient to get well promptly and perfectly. If you cannot and a second operation is necessary, tell your patient or the friends immediately, otherwise you will bring abdominal surgery into bad repute.

Hysterorrhaphy for Retroversion.

The operation of stitching the uterus to the anterior abdominal wall for retroversion of long standing has given excellent results. In a paper in the *American Journal of Obstetrics* on "Mechanical and Surgical Methods of Treating Retro-Displacements of the Uterus," by Alfred C. Carpenter, of New York, the method of hysterorrhaphy is spoken of as one of the foremost at our command. Its technique is simple. With the usual antiseptic precautions an incision is made in the median line of the abdomen midway between the umbilicus and pubes; two fingers are introduced; adhesions, if they exist, are broken up and the fundus uteri brought up into the abdominal wound and grasped with vulsellum forceps. With a knife or small pair of curved scissors the peritoneum is denuded from the anterior surface for about the size of a twenty-five cent piece. Then two or three sutures of heavy silkworm gut are introduced through the uterine tissue, taking a generous hold so there will be no danger of their cutting out by the traction put upon them by the weight of the organ, and at the same time guarding against penetrating the uterine cavity. These sutures are then carried through the entire abdominal wall on either side of the incision and are tied, thus fastening the fundus in the median line midway between the umbilicus and pubes. The sutures are allowed to remain about three weeks to assure firm union between fundus and abdominal wall.

The Glycerine Suppository as a Substitute for the Glycerine Tampon.

Dr. J. T. Graham, in a paper read before the Virginia Medical Society, speaks of the general use of the glycerine tampon. The only way in which glycerine relieves congestion of the uterus and its adnexa is by depleting the engorged vessels of these organs by means of the process of osmosis on account of the great affinity glycerine has for water. Reasoning from this fact, he concluded that glycerine in the solid state would have a greater effect upon the inflamed parts to which it might be applied because it would take up a greater amount of serum and the effect would be more prolonged on account of the gradual dissolving of the glycerine. He therefore introduced into the vagina, close up to the cervix, an ordinary rectal glycerine suppository and held it in place by a pledget of wool. The effect was much superior to that of the glycerine applied with the tampon. He also had glycerine suppositories made containing one or two grains each of alum and thymol. The advantages of the glycerine suppository may be stated as follows:

1. Easy application, as it does not require the use of the speculum.
2. Its greater and more prolonged effect, its action extending at least over a period of thirty-six hours.
3. It can be used in the treatment of the virgin without the use of the speculum and will remain in place without the pledget of wool; or if it seem best the patient can be taught to apply it herself.—*Med. Review.*

PATHOLOGY.

Extreme Cardiac Dislocation

A fully described and clearly illustrated case of extreme left cardiac displacement occurring in a woman of forty-six years is recorded by Heyse (*Centralblt. f. klin. Med.*). The apex-beat was distinctly visible under the angle of the scapula, and the precordial dullness could be made out to the left side posteriorly, immediately over the hepatic and splenic areas of dullness, while at its usual position in the left front there was pulmonary resonance. The etiology of this extreme cardiac displacement is of special interest, which the author, after the exclusion of other forces, especially of old-standing pleuritic adhesion, refers to arrested development of the left lower pulmonary lobe. Analogous observations in literature, on which the author bases his opinions, make this very probable, and we must refer for an estimation of this relationship to the ample statements in the work itself.

OBSTETRICS.

A Sign of Breech Presentation.

In *La Clinique Internal* Pinard asserts that when, in a woman who has passed the sixth month of pregnancy, a sharp pain is produced by placing the hand on the fundus uteri, it may be almost affirmed that there is a breech presentation. The fact is very frequent, although not constant, being present in about 70 per cent. of cases. The pain is sometimes spontaneous, and if version is performed it disappears. Pinard claims that the pain is due to the "irregular distention produced by the rounded mass of the head," but he does not explain how an irregular distention can be produced by a rounded mass.

Vaginal Secretions in Parturient Women.

Last month some statistics were given on antiseptic obstetrics. Since then we read that Doderlein, Winter, Steffek and others claim to have found pathogenic micrococci, particularly the staphylococcus albus and aureus and other pus-producing microbes, in the vaginal secretions of women after labor. On the other hand, Konig examined the vaginal secretions of 100 women after labor who were aseptic at the period of labor, and found in the lochia more frequently the streptococcus, seldom the staphylococcus

aureus and never the staphylococcus albus. In 300 pregnant women he found the vaginal secretions to be acid, and concluded that in pathological conditions the secretions attain a much higher degree of acidity, so that the streptococcus pyogenes could hardly thrive therein, and he was unable to secure cultures of this germ. With the exception of the thrush and gonococcus germ, he concludes that the vagina of every untouched pregnant woman contains nothing pathogenic and is therefore aseptic. He considers vaginal injections of antiseptics dangerous to the ordinary patient, in that they may chemically lessen the resistance of the tissues to bacteria and may increase the intensity of septic endometritis by washing bacteria into the uterine cavity.

This is another instance of disagreement among so-called authorities, and leaves nothing for the humble practitioner to do but read both sides and then use his own good judgment. Every experienced physician knows that unless he carries poison into the vaginal canal on an unclean finger, in private practice, the kind most of us do, there is little reason to fear these pathogenic microbes. Cleanliness alone is all that is usually required either before or after labor; but at the same time it is quite certain that there are advantages and disadvantages in each method. A hot sublimate or carbolic injection during labor shrivels and contracts the vaginal mucous membrane by contracting the capillaries, removes from it its natural lubricating secretion, thus largely augmenting the friction between the head and the vaginal walls, retarding the progress of labor and necessitating greater powers of expulsion. After labor, when it is desirable to use a wash for cleansing purposes only, simple, plain borax dissolved in warm boiled water will be found pleasant and efficient. Let the solution be of about the specific gravity of the blood so as not to encourage osmosis.

Strychnine as a Prophylactic in Weak Labor Pains.

Dr. Duff (*Centralblatt f. Gynakologie*) employs strychnine as a prophylactic in decreased muscular tonus and general weakness of pregnant women, as well as in cases giving a history of weak and irregular uterine contractions in previous labors, distinct weakness and flaccidity of the abdominal muscles and post-partum hemorrhages from faulty contraction of the uterus. He prescribes 1-64 gr. of the drug three times a day, commencing six or eight weeks before the date of the expected labor; eight days before the event the dose may be increased to 1-48 and 1-32 gr. The results are claimed to be very satisfactory.

Unconscious Delivery.

Le Blond (*Jour. de med. de Paris*) related in July a remarkable case before the Medico-Legal Society of Paris. A woman, aged twenty-seven, who had been seduced and deserted, was seized with slight colicky pains, but continued to work. In the course of the following night she was attacked with still more severe pain. Thinking that an action of the bowels would give relief, she sat upon her chamber utensil; on straining, a live child was born. This alarmed her greatly, but she cut the cord with scissors, wrapped the infant in a cloth and walked downstairs, telling the people in the house, in fear and trembling, what had happened. Violent flooding set in. The cord had not been tied. Early in the morning Le Blond saw the patient and found the placenta still in the vagina. He extracted it. The mother and child did very well. Had the child died the mother would have been very strongly suspected of murder, especially if she had attempted to defecate in a public privy, in which case the child would almost inevitably have been killed.

NEWS AND MISCELLANY.

Sanitary Climatology.

U. S. Department of Agriculture,
Weather Bureau,
Washington, D. C., January 2, 1895.

The interest manifested by every class of people in the subject of climate and its influence on health and disease has determined the Honorable the Secretary of Agriculture, through the medium of the Weather Bureau, to undertake the systematic investigation of the subject.

It is hoped to make the proposed investigation of interest and value to all, but especially to the medical and sanitary professions and to the large number of persons who seek, by visitation of health resorts and change of climate, either to restore health or prolong lives incurably affected or to ward off threatened disease.

The study of the climates of the country in connection with the indigenous diseases should be of material service to every community in showing to what degree local climatic peculiarities may favor or combat the development of the different diseases, and by suggesting, in many instances, supplementary sanitary precautions; also by indicating to what parts of the country invalids and health seekers may be sent to find climatic surroundings best adapted to the alleviation or cure of their particular cases.

The hearty co-operation of the various boards of health, public sanitary authorities, sanitary associations and societies and of physicians who may feel an interest in the work is asked to achieve and perfect the aims of this investigation.

No compensation can be offered for this co-operation other than to send, free of cost, the publications of the bureau bearing upon climatology and its relation to health and disease to all those who assist in the work.

Co-operation will consist in sending to this office reports of vital statistics from the various localities. That these reports may be of value, it is evident to all that they should be

accurate and complete and be rendered promptly and regularly. Blank forms of reports have been prepared so as to occasion as little trouble and labor as possible on the part of the reporter, and will be furnished by the bureau on application.

At the very beginning of the investigation it is not possible to outline precisely the channels through which the results obtained will be made public, but it is hoped to publish a periodical devoted to climatology and its relations to health and disease. The publication will probably resemble in size and general appearance the present *Monthly Weather Review*, the subject-matter being, of course, different.

More detailed information will be furnished on application.

MARK W. HARRINGTON,
Chief of Bureau.

MEETINGS OF STATE MEDICAL SOCIETIES FOR 1895.

Society.	Name and Address of Secretary.	Time and Place of Meeting.
Alabama	J. R. Jordan, Montgomery	April 16, Mobile
Arizona Territory	L. D. Dameson, Phœnix	February 5, Phœnix
Arkansas	L. P. Gibson, Little Rock	May 1, Little Rock
California	W. W. Kerr, San Francisco	April 16, San Francisco
Colorado	E. R. Axtell, Denver	June 18, Denver
Connecticut	N. E. Wordin, Bridgeport	May 22, Hartford
Delaware	W. C. Pierce, Wilmington	June 14, Wilmington
Florida	J. D. Fernandez, Jacksonville	April 16, Gainesville
Georgia	D. H. Howell, Atlanta	April 17, Savannah
Idaho	C. L Sweet, Boise City	September 9, Boise City
Illinois	J. B. Hamilton, Chicago	May 14, Springfield
Indiana	F. C. Woodburn, Indianapolis	May 30, Indianapolis
Iowa	J. W. Cokenower, Des Moines	April 17, Creston
Kansas	G. C. Purdue, Wichita	May —, Topeka
Kentucky	Seele Bailey, Stanford	June 5, Harrodsburg
Louisiana	P. B. McCutchon, New Orleans	May —, New Orleans
Maine	C. D. Smith, Portland	June 5, Portland
Maryland	J. T. Smith, Baltimore	April 26, Baltimore
Massachusetts	F. W. Goss, Boston	June 11, Boston
Michigan	C. W. Hitchcock, Detroit	June —, Bay City
Minnesota	C. B. Witherle, St. Paul	June 29, Duluth
Mississippi	H. H. Haralson, Forest	April 12, Jackson
Missouri	F. R. Fry, St. Louis	May 21, Hannibal
Montana	W. M. Bullard, Helena	April 16, Anaconda
Nebraska		
Nevada	W. A. Phillips, Reno	January 14, Reno
New Hampshire	G. P. Conn, Concord	May 30, Concord
New Jersey	Wm. Pierson, Orange	June 25, Cape May
New Mexico	F. H. Atkins, East Las Vegas	July 12, East Las Vegas
New York	E. D. Ferguson, Troy	October 16, New York
North Carolina	R. D. Jewett, Wilmington	May 14, Goldsboro
North Dakota	G. A. Carpenter, Fargo	May 25, Fargo
Ohio	T. Hubbard, Toledo	May 15, Columbus
Oklahoma Territory	C. D Arnold, El Reno	
Oregon	F. Canthorn, Portland	May 31, Portland
Pennsylvania	Wm. B. Atkinson, Philadelphia	May 21, Chambersburg
Rhode Island	W. R. White, Providence	June 6, Providence
South Carolina	W. Pyre Porcher, Charleston	April 14, Columbia
South Dakota	W. J. Mayturn, Alexandria	April —, Alexandria
Tennessee	S. S. Crockett, Nashville	April 9, Nashville
Texas	H. A. West, Galveston	April 23, Dallas
Vermont	D. C. Hawley, Burlington	October 10, Burlington
Virginia	L. B. Edwards, Richmond	
Washington	J. R. Thompson, Seattle	May —, Seattle
West Virginia	G. A. Aschinan, Wheeling	July —, Elkins
Wisconsin	C. S. Sheldon, Madison	May 3, Milwaukee

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ORIGINAL ARTICLES.

AN ETHICAL VIEW OF A MEDICAL QUESTION.

MADANA F. DEHART, M.D., JERSEY CITY, N. J.

Herbert Spencer in his "Synthetic Philosophy" says: "In the history of humanity as written, the saddest part concerns the treatment of women; and had we before us the unwritten history, we should find the part still sadder. I say the saddest part, because though there have been many things more conspicuously dreadful—cannibalism, the torturing of prisoners, the sacrificing of victims to ghosts and gods—these have been occasional; whereas the brutal treatment of women has been universal and constant. In looking first at their state of subjection among the semi-civilized, we pass to the uncivilized and observe the lives of hardship borne by nearly all of them—if we think what must have gone on among those still ruder peoples who, for so many thousand years, roamed over the uncultivated earth, we shall infer that the amount of suffering which has been and still is borne by women is utterly beyond imagination. As I have before pointed out, this ill-treatment of women has been an unavoidable concomitant of the chronic struggle for life among tribes, which is still going on in some places, and once was universal.

"The brutality fostered in men by their dealings with enemies unconsciously operated throughout their daily lives. The weakest went to the wall inside the tribe as well as outside the tribe. The utter absence of sympathy made it inevitable that women should suffer from the egoism of men, without any limit save their ability to bear the entailed hardships. Passing this limit, the ill-treatment by rendering the women incapable of rearing a due number of children, brought about disappearance of the tribe; and we may safely assume that multitudes of tribes disappeared from this cause.

"Only during these later periods of human history in which the destructive passions have not been so constantly excited by the struggle for existence between societies small and large, has the treatment of women slowly become less brutal; and only during the same period has there been growing up among men, a perception that women have certain claims upon them, and a sentiment responsive to this perception."

Mr. Spencer ascribes this change in the conduct of men to women to the fact that character has changed and that customs have been gradually ameliorated, rather than to the fact that they recognize and respect the true ethical basis for this better treatment, and he says that as long as the code of conduct which regulates the general relation of the sexes is thought of as conventional in its origin, it is more apt to be disregarded than when it is seen to

originate in that form of beneficence which seeks to make less unequal the lives of those to whom nature has given unequal advantages.

The pages of fiction tell in glowing words the same story, and Effie Deans, Hetty Sornl, Tess of the d'Ubervilles, Trilby and many other heroines, while they excite our sympathy for their sufferings, rouse in us indignation that penalty should be so unequally distributed and that artificial social distinctions should discriminate so unjustly against those on whom nature has laid the heaviest burdens. Even the medical journals, which are supposed to deal with the purely scientific aspects of life, contain many records and record many pathetic tragedies second to none in fiction to those who are gifted with sufficient imagination to fill out these statistics with the sentiments and feelings which must always go along with them in real life, making us realize that there is yet much to be done and suffered before the true ethical relation between the sexes is reached.

The subject is so difficult, it is so intrenched with prejudices and so many vested interests seem to be enlisted to perpetuate the present injustice, that but for its great importance to the race as well as to individual happiness, we would gladly let it alone, to be cured by the slow process by which other relics of barbarism have gradually disappeared.

It is impossible to tell just how much influence the protests of outraged womanhood against her wrongs may have had in bringing about these changes. It has been said that those who would be free themselves must strike the blow, and the great dramatist tells us that the fault is not in our stars, but in ourselves, that we are underlings. If this is true, silent endurance of wrong sometime ceases to be a virtue, and at last the time comes when it is a manifest duty to tell the truth as we see it, that the cause of justice may have the benefit to be gained from different points of view.

In a recent article in THE REPORTER, entitled "The Marriage of Syphilitics," a physician discusses the right of such persons to marry, and he assumes that all about whom there could be any such question, are men. After discoursing on the great danger to which he exposes his innocent wife and unborn children, if his physician should make a mistake and pronounce him cured when he was not, he says that after he had been thoroughly treated and apparently cured, he should have no hesitation in advising him to marry, as it would be a great hardship to prevent his having the advantages of matrimony. The physical barrier of positive contagious disease being removed, there seems to be no thought given to the lowered vitality and general physical deterioration which he would bring to the marriage union—none to the mental and moral defects with which such diseases are frequently associated, and which often render a happy marriage impossible. There is no suggestion that he should choose a woman similarly afflicted, to whom there would be comparatively little risk. and with whom, should the children all die or be hopelessly idiotic or diseased, there could be no occasion for recriminations, but together they could bemoan their loss and repent of their folly. There is no suggestion that he should plainly state the case to the fair, innocent girl he proposes to invite to share with him the unpleasant harvest which he must reap from the crop of wild oats sown so liberally. Simple justice would seem to dictate such a course, to say nothing of the beneficence which we are told should characterize the relations between husband and wife.

In the same number of the journal, two cases are cited where men contracted gonorrhœa and gave it to their wives, they soon showing the usual symptoms, urethritis, vaginitis with pelvic inflammation, and the usual unconsciousness of the cause of their trouble, with the usual pathetic confidence in the integrity of their husbands, and the narrator asserts that these cases gave him so much "food for reflection" that he brought them to the knowledge of the medical society. There is no record of an operation to remove the poor offending organs which had come to such grief in their legitimate work of perpetuating the race. It will no doubt come later, when these women will make this last offering to the cause, and let us hope it will be placed to their credit in this long and unequal account. In the discussion which followed there was much questioning about just how long, if ever, it was safe for a man to marry after having been apparently cured of this dis-

ease; one gentleman declaring that no man wished to give his wife gonorrhœa, whether she was newly married or otherwise, and especially since so many pelvic diseases which required extensive operative procedure to relieve are due to this cause. He said that the question ought to be discussed and settled, as many authorities maintain that no woman ever marries a man who has had gonorrhœa but suffers in some way from its effects.

These facts turn a powerful light on the causes of disease among women, showing that much which has been usually attributed to her folly, has a different cause. Undoubtedly tight lacing, heavy skirts, imprudence during menstruation and after childbirth, with unwise efforts to prevent conception, may make her less able to contend successfully with these poisonous germs introduced from without, and less able to recover after the frequent operations which are necessary to remove her ovaries and tubes, but they can hardly be looked on as the real cause of her life-long invalidism. It did not appear, from anything said, what would be considered proper advice to a woman under similar circumstances, but one can safely conjecture that if there were no misgivings about giving her a clean bill of health, there would be great fears entertained lest she might not be morally fit to train children to lives of usefulness and honor, or a suitable companion for a virtuous and honorable man, as there might be some intangible and subtle changes due to her past life which neither drugs nor the most genuine repentance could efface.

The reason for this difference in treatment is hard to justify on any ethical grounds, and though in many ways women are better off to-day than in earlier times, there is yet a long distance to go before we reach that highest form of the sexual relation of which evolutionists prophesy, when each is anxious to make a sacrifice rather than accept one.

ALBUMINURIA AND NEPHRITIS IN CHILDREN.*

Dr. P. Le GENDRE, Paris, France.

I have designedly separated these two terms, albuminuria and nephritis, as they are not necessarily associated; for albuminuria is present in a good number of morbid conditions without being connected with a renal lesion, and during the course of a nephritis it may disappear or be present in but traces. I shall consider, successively, albuminuria in the new-born, in childhood and in youth.

Examination of the urine should be made in children of every age as well as in adults, though it undoubtedly presents difficulties in nurslings on account of the difficulty of obtaining pure urine. One may, however, succeed in this by tying a sack of goldbeater's skin to the child's penis. Albumin has been found in the urine of the new-born. In tedious labors this has been attributed to asphyxia of the child. In those cases where it is noticed after an easy labor, it has been attributed to the sudden alterations in the circulation which take place at the moment of birth. Thus there follows a period of unbalancing of the vascular equilibrium which gives rise to engorgement of the capillaries of certain regions, and notably to an increase of pressure in the renal arteries. The consequence of this may be in certain cases an immigration of blood-corpuscles into the uriniferous tubules and consequent albuminuria, which favors a sort of transitory desquamation of the renal epithelium, especially that of the glomeruli, which is still but little resistant. Therefore one will find in the urinary sediment hyaline casts, epithelial *debris* and urates. The albuminuria of the new-born does not last longer than a week; it presents no active therapeutic indications. One will protect the child from cold by wrapping it in cotton or by placing it into a *couveuse*. Nursing should be conducted with prudence,

*A clinical lecture delivered at Hopital Trousseau, Paris, France. Translated by F. H. Pritchard, M.D., from La Semaine Medicale, No. 70, 1894.

the skin might be rubbed, and in case the urine is scanty one might give daily a rectal injection of boiled water.

If albuminuria is regarded as exceptional during the first years of life, it is because the majority of physicians do not look for it except when convulsions and edema invite urinalysis. But if one examine the urine of children who are seemingly well, but living in large numbers together, as in orphan asylums, a proportion of from 6 to 40 out of 100 will present albuminuria. Now, all of these children show some disturbance of health, as impetigo, eczema, digestive troubles, stomatitis, slight forms of tonsillitis or bronchitis. These cases of albuminuria are, therefore, caused by the same factors which give rise to this symptom in larger children and in youths.

In this class as well as in adults, among the most frequent causes of albuminuria besides infectious diseases are gastric disturbances, especially when accompanying a dilation of the stomach with permanent stagnation of food, enteritis and certain pathological states of the liver. In dyspeptic children one may observe transitory albuminuria appearing during the period of digestion and disappearing afterward. These forms are either dependent upon imperfect function of the stomach or intestines or upon a functional insufficiency of the liver. If this latter organ permit the poisons formed in the liver to pass through it, having as it does its function to arrest and to neutralize them in part, and if the glycogenic and biliary functions are inhibited, it may cease for a time to accomplish the physiological transformation of the albuminoids derived from the food into assimilable albumin; there is produced one of those states which has been clinically baptized as "torpor of the liver," to which certain forms of albuminuria without even a transitory renal lesion may be attributed. Again, it is possible that the liver, allowing those poisons to pass which it should physiologically retain (Hegar and H. Roger), and these being eliminated by the kidney, irritate those organs and give rise to an albuminuria which is truly renal. These various forms of albuminuria of gastro-intestinal or hepatic origin are therefore dependent upon auto-intoxication. Hence with regulation of the diet intestinal antisepsis will successfully manage them.

All forms of poisoning may produce albuminuria; many drugs may do it, as carbolic acid, resorcine, mercury, etc.

In children, as in adults, there may be albuminuria of cardiac origin during the period of asystolia, from venous stagnation in the kidneys.

In growing children, as well as in weak and anemic youths, there is a form of albuminuria which has been termed cyclic. Gull, who was one of the first to study it, attributes it to a nervo-muscular atony; he considered it as almost physiological from the frequency with which it was found, and compared it with the spermatorrhœa of weak and neuropathic youths. Lecorché and Talamon think that it is connected with an alteration, though slight, of the renal parenchyma, a lesion which if cared for ends easily in recovery, but if neglected is prone to run into Bright's disease. It is easily misunderstood or overlooked, though it will not escape you if you follow the advice which I have repeated again and again, not to be satisfied with the examination of a child until you have analyzed its urine.

These cyclic albuminurias give rise to a special clinical picture. The children are languid, pale, fatigued; they easily get out of breath; they complain sometimes of palpitation of the heart; refuse to play; occasionally their appetite decreases or their digestion is disturbed and is accompanied with distention of the stomach and intestines. They suffer from persistent or periodic headaches which assume the form of a migraine, with insomnia and disturbances of vision. These patients, who are frequently regarded as anemic, are not only sufferers from albuminuria, but also often from phosphaturia, which is of importance in treatment.

Certain remedies which are too much lauded as tonics will not relieve these patients. As they are often dyspeptic, those wines which are usually prescribed to strengthen and which are especially rich in alcohol if joined with the so-called "digestive elixirs" (a pitiable abuse of our age) are to be avoided. I advise you in such cases to leave aside cinchona and iron, as well as arsenic, and turn your whole attention to the digestive tract and to the general hygiene, for the disease is usually dependent upon a vicious trans-

formation of the albuminoids in the system. Do not require that these patients eat too frequently of bloody beefsteak, for it is repugnant to them. You will especially prescribe milk diet, then eggs and milk, boiled fish, grilled meats, roast poultry, a good proportion of green vegetables, which are to be well cooked, fruits and *purees*. The nervous system may be stimulated by frictions of the skin with a hair glove or with a mixture of alcohol and turpentine. The child should be taken regularly into the open air, but with avoidance of excessive exercise. One may also employ to a certain extent either sulphurated or salt water baths. The only remedies which I have found useful are strychnine and the phosphates.

Now we must limit ourselves to a study of albuminuria of renal origin. You have seen in the hospital several examples of albuminuria associated with nephritis. In certain cases were purely acute varieties; in others you have been able to follow these into chronic forms. Again, we have been able to diagnose typical chronic varieties. The scarlatina ward especially has furnished us with numerous examples of acute and transitory nephritis. In this disease the invasion of the organism by the toxines may produce from the beginning a suppression of the functions of the kidneys. In other cases later, at the end of eight to fifteen days, secondary nephritis has been observed—a less tempestuous form which was liable to be overlooked if the child leave the hospital too soon; or if it leave off too early milk diet, it may be seized with a nephritis with anasarca, which is the type of acute nephritis of glomerular origin. It may in turn degenerate into a subacute or chronic form and become an epithelial, interstitial or mixed variety of Bright's disease.

You know that one now and then observes nephritis after measles, more frequently in small-pox and exceptionally in chicken-pox, where it has been overlooked until very recently. It is rarely seen during the course of mumps, but very frequently in typhoid fever and sometimes after the grippe.

Diphtheria is one of the diseases most frequently accompanied by nephritis. In the Blache ward there is a little girl of five years whose case I shall present you briefly. After having been sick for several days with a severe attack of diphtheria she entered, September 28th, the Bretonneau ward, where she was treated by the diphtheritic antitoxine and she was discharged apparently cured. On October 13th she reëntered the hospital with a paralysis of the velum palati, a nephritis characterized by ischuria and a great quantity of albumin in the urine, a heart-beat so weak and irregular that we were decidedly alarmed. This little patient is, however, to-day cured of her nephritis, and there only remains a slight paralysis of the palate. With the present state of our knowledge, one might ask if the diphtheria alone is to be accused of having produced a renal alteration which nearly killed our patient. Can the antitoxine act injuriously upon the kidney? "No!" answer MM. Roux and Martin. "Perhaps!" says Cartel. And I do not believe that he is wrong in making this reserve; yet prolonged observation only will settle the question. In the hospital and especially in private practice, in following the children placed under treatment by the serum, it has already been remarked that though the results are remarkable, marvelous even in the immediate effect, it may produce in some children certain side symptoms, as gastric disturbances, vomiting and cutaneous manifestations—not only urticaria, but also papular, circinated, scarlatiniform erythemas, etc.—articular pains, anuria, phosphaturia, urobilinuria and localized and transitory paralyses. One might, therefore, ask if the introduction into the blood of the serum of horses does not exercise an immediate or distant injurious influence upon the organism. I advise you to keep those children under careful surveillance which are treated thus, as well as to keep within the bounds of the necessary dosage, in order not to add by excess of zeal a sero-therapeutic intoxication to the diphtheritic.

Among those varieties of nephritis accompanying infectious diseases, there yet remain to be mentioned those which complicate certain forms of infectious tonsillitis without an exudative membrane in the throat and which are due to streptococci, staphylococci and pneumococci. Professor Bouchard and Dr. Kannenberg have made them well known. Therefore do not forget always to examine the urine of those affected with various forms of tonsillitis, for you will often derive from it important indications. Several years

ago I saw a child with frequently recurring tonsillitis which led to a considerable hypertrophy of the tonsils. After each of these attacks the child would be sick for several days and its urine would contain a notable quantity of albumin. Under the influence of a milk diet it would disappear, but reappear after another attack. Thinking that in one of the tonsils there was a focus of infection and poisoning which gave rise to these phenomena, I called in consultation the surgeon of the family, who, also of my opinion, destroyed the tonsils with the galvano-cautery. Since then the albumin has not reappeared in the patient's urine.

We might complete the list of the forms of acute nephritis by citing those which accompany or follow certain bronchopneumonias; those which are the consequence of ascending infections of the genito-urinary tract and follow a vulvitis, a cystitis, etc.; the toxic varieties, rare, however, in children, as from cantharides, and alcoholic nephritis in children who are forced to drink alcoholic beverages.

I rapidly pass in review as examples of chronic nephritis, those which result from not curing acute varieties; those accompanying paludism, renal lithiasis, a rare form in children; those dependent upon various forms of poisoning, as of intestinal origin, lead and alcohol, and that dependent upon intermittent hydronephrosis. In this latter case the renal pelvis is invaded by microbes and symptoms of pyonephrosis may supervene. Besides, we might cite tuberculous nephritis, amyloid nephritis consecutive to ancient foci of suppuration, which pour their poisons incessantly into the system. This variety is that observed in Pott's disease, in dilatations of the bronchi and in chronic bronchitis. Arterio-sclerosis is rare in children, yet in subjects who have passed through a number of infectious diseases the kidneys may undergo a sclerosis similar to that of the liver.

As to the symptomatology, it does not differ from that of adults. At the beginning of acute nephritis the urine is diminished in quantity. This is a sign which is not to be neglected. Easily noticed in children of a certain age, it is only appreciated with difficulty in nurslings. One must keep account of the number of times that the infant urinates in twenty-four hours. The density is ordinarily above the normal; its color may be rose-tinted on account of a slight admixture of blood; hence do not make your diagnosis until after examination under the microscope. We have at present in the hospital a child affected with paroxysmal hematuria, whose urine is frequently of a color varying from that of a currant to that of Malaga wine, without a single red corpuscle being discoverable. Finally, chemical analysis will permit you to recognize both the quantity and quality of the albumin.

One word on the retractility or non-retractility of the albumin, a sign which has been pointed out by Professor Bouchard as of clinical importance. If one heat the urine after having precipitated it by a coagulating reagent, one will observe that sometimes it will break up into a number of flakes which swim in the clear urine and are very distinct from it; again, it may form a single and large clot which appears more or less as a core; at other times, on the contrary, the albumin and the urine remain intimately united and the urine in spite of boiling becomes uniformly opaque. According to Professor Bouchard, retractile albumin is alone associated with lesions of the kidneys, which often are then characterized by the presence in the urine of epithelium and casts only. I have confirmed the exactness of this sign so many times that I believe it to be quite constant.

As to the symptoms of the nervous system, there are headache and disturbances of vision; the digestive system will present vomiting and obstinate diarrhœas; a dyspnœa which is very pronounced, with hardly a stethoscopic sign noticed in the respiratory tract, save here or there little areas of subcrepitant râles, which Laségue claims to be characteristic of "albuminuric bronchitis" and which are due to a pulmonary edema. As to the skin, one may observe various erythemata, prurigo with little crusts and lesions from scratching, purpura, etc. Never neglect to examine the urine when you have to do with any form of skin disease in a child. At times one may meet with articular pains which may simulate acute rheumatism. Auscultation and percussion will often enable you to perceive a gallop rhythm from hypertrophy of the heart when a chronic nephritis is under consideration. Finally, the serous membranes may be the

seat of effusions—hydrothorax, ascites, hydropericardium. But dropsy will be especially noticeable in the subcutaneous cellular tissue or as generalized anasarca, yet frequently as local edema in regions which are easily infiltrated, as the eyelids and scrotum.

The more or less rapid and natural termination of every form of acute or subacute nephritis whenever a sufficient portion of the renal parenchyma is destroyed, is uremia. Hence all treatment has as its object the prevention of this auto-intoxication of the organism which forms the chief danger of all forms of nephritis. The poisons, as Bouchard has demonstrated, are introduced into the economy by several ways: some enter along with the foods, others are derived from gastro-intestinal fermentation, while still others are formed by the cells of the organism itself. All of these poisons must be incessantly eliminated by the natural emunctories or destroyed by the liver or by interstitial oxidation. The kidney is the principal organ of elimination, and whenever it functionates incompletely auto-intoxication commences.

What treatment will enable us to prevent or to combat an already existing auto-intoxication? The first indication would be to choose a food which is as little toxic as possible. Such is milk, which contains but little potash, few organic matters, although enough to replenish the waste of the body, and which, from the lactose and various salts, possesses diuretic properties. If you cannot give milk administer water in abundance, but in small quantities frequently repeated. To favor the expulsion of poisons collected in the digestive tube, one will employ drastic purgatives, such as jalap, scammony or compound tincture of jalap. This should not be too frequently repeated, as it hinders excretion by the kidneys, which throw out more poison than either the intestinal serum or the perspiration. To increase the secretion of urine cold-water injections will be found a precious measure; they produce a spasm of the intestinal vessels which causes the blood pressure in the portal system to increase and thus favorably influences that of the kidneys. I always inquire how the child urinates, and I prescribe cold-water injections whenever I learn that it passes but little water. I have ordered so many as ten or twelve injections a day, and in cases of anuria even one every hour. In this latter condition it is convenient to inject water under the skin in the form of an artificial serum. If the little patient refuses to drink, one might introduce the water or the milk into the stomach by means of a soft catheter passed through the nostrils. I also employ cold baths, complete or partial cold packs, all of which increase the secretion of urine.

As remedies, different writers advise the salts of potash, squills, digitalis and caffeine. Do not use any of these diuretics, whose irritating action only serves to alter the renal epithelium. The various diuretic beverages owe their properties chiefly to the water and the slight quantity of the various salts of potash—the nitrates, acetates and tartrates—which they contain, but these potash salts all are to a certain degree toxic. As to digitalis, in certain cases it is a precious measure, but whenever the urine is nearly suppressed it is of itself actually dangerous. It then adds its own poisoning to that of the organism, before having succeeded in forcing the barrier, the kidneys. Caffeine does not present the same danger; it may be administered subcutaneously, as it irritates the stomach and provokes vomiting. Therefore, apart from caffeine there is but little advantage to be obtained from diuretics. The sudorifics also are of little value, for themselves eliminating but little poison, they have the disadvantage of decreasing the renal secretion. I have never seen uremic patients receive much benefit from vapor baths. Pilocarpine has been praised by different writers, but there is always the fear of an oversecretion of saliva and the bronchorrhœa which it produces, along with the diaphoresis it produces. When it was employed on Vulpian's recommendation, I have seen patients die before the crisis came on, and then with a considerable increase of the pulmonary râles. Another powerful means of combating uremia is blood-letting, but, unfortunately, this is a difficult operation in little children, as it exposes them to collapse. It has been replaced by the application of wet cups to the lumbar region, which diminish the congestion of the kidney. In Petit's triangle there is a system of emissary veins which establishes a communication between the cutaneous and renal circulation, and, as Renaut, of Lyons, has shown, it is only necessary to re-

move a slight quantity of blood from the kidney to decrease the peritubular and periglomerular edema and to reëstablish the secretion thus mechanically compromised. In older patients one may do phlebotomy, often with success; one is rarely obliged to repeat it.

As to other accessory measures, there are inhalations of oxygen and intestinal antisepsis, preferably obtained with alpha or beta naphthol or with the benzoate of bismuth-benzonaphthol. I warn you against the other intestinal antiseptics, as salol or betol, whose elimination might irritate the kidney.

To recapitulate. The various measures which I habitually employ to treat the ischuria, the anuria and uremia in acute nephritis, or in the acute exacerbations of the chronic variety are: Absolute milk diet; plenty of beverages, as water or milk diuretic drinks; intestinal antisepsis; drastic purgatives, as jalap or scammony; frequent rectal injections of cold water, either made with water which has been boiled and then allowed to cool, or with a solution of naphthol (0.20 per cent.); the cold pack; revulsives, as mustard plasters, dry cupping or leeches to the lumbar regions; injections subcutaneously of caffeine or an artificial serum; inhalations of oxygen; finally, in the grave forms blood-letting or wet cupping of the lumbar regions.

There only remains the treatment of the chronic variety after the acute attack has passed over. This is quite difficult and, it must be confessed, quite uncertain. What remedies are to be employed? Tannine has been praised, but I have never seen it give any real results. The iodides must be given with caution, yet they are of actual service in chronic nephritis with a predominance of arterio-sclerosis. I only mention the salts of strontium, about which so much noise is being made nowadays, I have seen them diminish the albumin for a short time, after which it would reappear in greater quantities than ever. The phosphates act as tonics, but not upon the kidneys. Therefore, but few or no medicines.

The hygiene should be carefully attended to. You will recommed the parents to keep their child with nephritis from taking cold by covering its skin with flannel; the skin must be kept functionating well by dry-rubbing it with a mixture of alcohol and turpentine. To avoid damp cold, you will advise sending the child, if it is possible, to the south during the wet and damp months; at all events have it occupy a dry room which looks toward the south. You will also continue the milk diet, which must be interrupted from time to time, as patients grow tired of it, and it is not sufficient to support the body. You will therefore make out a dietary with care to eliminate the harmful foods: meat, and above all that which is but little boiled, as well as those foods which are extracted from it, soup, blood or bouillon; fish, which sometimes contains very poisonous toxines; game, which is still more injurious, as it is often too high. As to vegetables, you will leave out asparagus, gooseberries, tomatoes and cresses. What foods are therefore allowable in chronic nephritis besides milk? Farinaceous and starchy foods; eggs, which are not harmful if well boiled, as their albumen is not the same as that of the blood and they do not increase the albuminuria; green vegetables and certain fruits. As a beverage, always milk, either pure or diluted with a weak mineral water. Alcohol in all forms is forbidden; no wine, no beer. If amelioration set in one may, at a certain time, return to the use of meat, commencing with white meat which is well cooked.

Therefore you have a certain alimentary gamut which you must run through, and which, with prudence, you will interrupt from time to time; putting your patient upon an absolute milk diet and then mitigating it somewhat. In this manner you will greatly lengthen your patient's life by preventing an extension of the renal lesion, for it has been demonstrated that a very small portion of renal parenchyma suffices to sustain existence, with the condition that no acute exacerbation set in from congestion nor a lesion due to a secondary infection, as from a broncho-pneumonia, erysipelas, etc., be added.

During the course of this lecture you have noticed that I rejected the use of drugs, especially when their use was of doubtful value, but the subject is peculiarly appropriate to demonstrate to you that one may carry out excellent and efficacious therapeutic measures without having recourse to drugs. This is more especially and strikingly true in children's diseases than in other branches of medicine, and I shall esteem myself happy if I have succeeded in impressing upon you this which I hold as profound conviction.

COMMUNICATIONS.

THE INDICATIONS AND NATURE OF TREATMENT IN SEVERE ABDOMINAL INJURIES AND INTRA-ABDOMINAL HEMORRHAGES UNACCOMPANIED BY EXTERNAL EVIDENCE OF VIOLENCE.*

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Every surgeon has undoubtedly at some time in his experience, either in private or hospital practice, met with cases coming under the class covered by the title of this paper. These are cases in which the history and general condition of the patient give the impression that there is a serious lesion within the abdomen, and yet, upon examination, we find total absence or only slight evidences of injury. The tendency, I fear with many, is to treat these patients tentatively, only to be awakened at the autopsy to the fact that a rupture or a tear existed in the abdominal cavity, which, by early radical operation, could have been relieved.

The mortality in these cases is appalling; references to the literature of the subject will amply bear out this statement, which is readily accounted for by the nature of the injuries. Where the lesion is of the liver or spleen, if the patient does not die of shock or hemorrhage, a violent peritonitis supervenes to which he shortly succumbs. If the liver, spleen or kidneys are involved, death from hemorrhage may ensue in a very short time. Should the stomach, intestine or bladder be ruptured and their contents poured into the peritoneal cavity, death from peritonitis is the result. In rupture of the mesentery the danger is from hemorrhage, yet when the opening in the mesentery is small a clot may form sufficiently large to control the bleeding. Should death occur under these circumstances it would be the result of peritonitis caused by the free blood in the peritoneal cavity. I report a case of this character where recovery followed immediate operation. In ruptured extra-uterine pregnancy death is due either to hemorrhage or peritonitis.

The usual history of these cases, with the exception of extra-uterine pregnancy, is that the patient has received a direct injury to the abdomen, which is found to be unaccompanied by external evidence. These injuries may result from railroad accidents, from being caught between shifting cars, or from blows upon the abdomen received in various ways.

This class of injuries is quite common in military surgery, more so in the past when spherical balls were used and only a low velocity attained. A majority were supposed to be caused by the violence of the wind displaced by the passing ball, but we now know that they were due to the impact of the balls almost entirely spent.

Two cases which illustrate this occurred at the siege of Sebastopol. In neither did the clothing or the abdominal walls show any signs of injury, but in both the liver and spleen were comminuted to a pulp and the intestines extensively lacerated (Mr. Hulke, *Lancet*, December 31, 1892).

As yet we have no reports from surgeons of the armies engaged in the present strife between Japan and China, but it will be of great interest to read the records of such cases. We can expect, I think, a very full and detailed account from the Japanese surgeons. We have all applauded the work of some brilliant individuals of the Japanese profession, and, in fact, we must assign to Japan in medicine the same standing that she has taken in other walks of civilized life, and which she has demonstrated she can hold.

The most prominent symptom is pain, which is accompanied by shock, the degree of which is dependent upon the extent of

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injury and the temperament of the individual.

I might say here that temperament and nationality have a strong bearing in the production of shock. Persons of a highly nervous temperament suffer more from shock than do phlegmatic individuals. For example, Americans are far more liable to suffer a severe degree of shock following injuries or operations than are the Germans.

The pain is peculiar and difficult to describe, but is readily recognized by one who has seen many of these cases and by the patient himself. It is not that of ordinary intra-abdominal affections, but is described by the patient as if something had given way or ruptured, and is usually accompanied by a consciousness of impending death. It is usually accompanied with tenderness, which will be more or less localized, unless the ensuing peritonitis be general. In the early stages of the injury, when shock is most profound, it may not be so pronounced, and if large doses of opium be administered it may be masked throughout the course of the trouble.

When vomiting is present it is usually associated with pain. Rarely does the vomited matter contain blood.

There is often seen a characteristic rigidity of the abdominal walls, which is due to intra-abdominal irritation. I have seen this so marked as to recall to mind the checker-board appearance of the normal abdominal walls as represented in the pictures of the early artists.

In the cases I have observed, consciousness has invariably been retained for varying periods of time. Restlessness is not usual in the early stages except in severe hemorrhage, but later on, when peritonitis develops, it is not an uncommon symptom.

The pulse and temperature vary according to the degree of shock. The former is weak and running, varying from 100 to 160, and the temperature subnormal. If reaction takes place the pulse becomes stronger and less frequent and the temperature reaches the normal line. After reaction peritonitis is invariably the rule, and is accompanied by an accelerated and a high-tension pulse. The temperature under these circumstances is unreliable, as it does not correspond to the degree of inflammation or septic infection. A high temperature with a slow pulse is less significant than a rapid pulse with a low temperature. In cases of septic peritonitis where autopsy revealed a belly cavity full of foul pus, I have seen the temperature run a normal course throughout the disease.

The part the sympathetic system of nerves, which has its largest distribution in the abdominal cavity, may play in injury to the abdomen is important in considering the differential diagnosis between the simple contusion and contusion accompanied by visceral lesion. In the former the absence of the severe and characteristic pain, of constant and persistent vomiting, of the anxious expression and presentment of impending death, and of any evidence of loss of blood, associated with the occasional presence of suddenly developed meteorism, will usually be sufficient to establish the differential diagnosis. This condition of meteorism is due to paralysis of the muscular coat of the bowel consequent upon the concussion of the plexuses. There are cases, however, where it is very difficult to say definitely whether there be a visceral complication or not. Under these circumstances one can only wait for a comparatively few hours, when, if improvement is not apparent, the operative course is to be pursued. When the solid viscera are the seat of injury hemorrhage will be the main source of anxiety. The pain and the exsanguination give the clue. If the patient should react, which is unusual unless the kidney is the injured organ, we will find, in addition, dullness on percussion in the flank. Rectal or vaginal examination may afford aid in determining the presence of a collection of blood in the pelvis. The solid organs suffer most from external violence on account of their fixity, density and close proximity to the bony structures. The liver is the most often injured, then the uterus, spleen and kidney, in the order named. The stomach is least often injured, there being very few such cases on record. Dr. J. W. Goff (THE MEDICAL AND SURGICAL REPORTER, 1892) reports a case of ruptured stomach following a horse-kick of the abdomen, verified by an autopsy. The shock was profound, and there was vomiting with absence of blood. The author states that he believes immediate operation would have saved the patient's life.

In the Glasgow *Medical Journal* for 1894, vol. xli, Andrews reports a case of rupture of the stomach without external evidence of violence, in which all the symptoms of a serious visceral lesion were present with the exception of vomiting. The rupture was upon the anterior wall, was about an inch long and involved all the layers. I cite this case as one of special interest on account of the location of the tear and the absence of vomiting.

The liver is the organ most often affected because of its position beneath the ribs and against the spine, and because it is held firmly in place by strong ligaments and blood-vessels. It is most commonly ruptured on its upper surface, generally in the right lobe, and in a majority of such cases the injury proves fatal. Dr. H. P. Loomis (*Medical Record*, January, 1893) reports a case where the patient was struck by a pole protruding from the back of a wagon, which, when the wagon turned the corner, struck him on the right side, leaving no external evidence of violence. There was a three-inch tear in the right lobe of the liver and a pint of blood in the abdominal cavity. The patient died in the street from hemorrhage before medical aid could reach him.

Mr. Battle (London *Lancet*, 1894) reports a case of rupture of the bile duct in a boy six years of age, who was run over by a hansom cab, in which there was but a slight shock without much pain or tenderness. Vomiting began early and persisted. On the fifth day slight jaundice developed. He was operated upon on the eighth day, and the abdominal cavity was found filled with bile. He died on the morning of the ninth day.

Autopsy.—Liver and gall-bladder were intact, but about one-half an inch beyond the junction of the cystic and hepatic ducts the common duct was found to be torn completely through. No other injury was found.

J. E., aged forty-six, was admitted to the German Hospital on November 17, 1893, suffering from injuries received by being struck by a locomotive. He had a compound fracture of the lower jaw, lacerated scalp wound and fracture of four ribs on the left side, with no other signs of injury. He died six hours later. Post-mortem examination revealed a hemato-thorax of the left side. The peritoneum was not perforated or otherwise injured, but the peritoneal cavity was filled with blood. The spleen was completely comminuted, and the left kidney had been forced from its bed and was floating in the retro-peritoneal space. There was an extensive hemorrhage between the layers of the mesentery, and a hemorrhagic extravasation of the posterior wall of the stomach.

H. M. C., colored, aged sixteen, was admitted to the German Hospital on the evening of December 3, 1894, with the following history: While playing about some moving freight cars he was accidentally caught between the bumpers, sustaining an injury to his abdomen. Examination upon admission failed to disclose any evidences of external injury. The introduction of the catheter drew clear urine. There was a moderate degree of shock, and the patient complained of severe pain in the abdomen and tenderness on palpation. Further investigation proved negative.

The resident surgeon, Dr. Page, not deeming the case of sufficient severity to send for me, treated the patient for shock. When I examined him upon the following day, it was very evident, from the severity of the abdominal pain and tenderness associated with very decided rigidity of the abdominal walls, that he was suffering from a serious intra-peritoneal lesion. I decided to open the abdomen at once. As soon as the peritoneal cavity was opened a large quantity of dark liquid blood escaped. The small intestines were delivered, when the cause of the lesion was found to be a ruptured mesenteric vein, the bleeding from which was arrested by the presence of a large diffused blood-clot occupying the interval between the layers of the mesentery. To make sure that there was no other lesion, the large intestines, the stomach, the liver and the spleen were carefully examined, but with a negative result. The abdominal cavity was washed out with warm saline solution, glass drainage was introduced into the pelvis and the wound closed. Recovery was uninterrupted.

L. C., male, Italian, aged thirty-five, was admitted to the German Hospital, with a history of a fall of about 50 feet, striking upon his abdomen. He was profoundly shocked and exsanguinated. The only external evidences of injury were some slight cuts on the hands and

head. A diagnosis of internal hemorrhage was made and the abdominal cavity opened up. Dark liquid blood escaped as soon as the peritoneum was opened, and the source found to be the mesenteric vessels. The mesentery was torn half-way across and the intestines lacerated in four places. The mesentery was united with a series of catgut ligatures. The rents in the intestines closed with the Lembert sutures. The abdominal cavity was washed out with hot saline solution and closed. He died two hours after the operation. The autopsy demonstrated several tears in the gut which had been overlooked and several grape-skins and pieces of fig in the peritoneal cavity.

The most common form of intra-abdominal hemorrhage is that resulting from ruptured extra-uterine pregnancy. While these cases may be due to traumatism without any internal evidence, they are usually spontaneous. While hemorrhage from the pelvic organs of the female usually occurs from a ruptured extra-uterine pregnancy, it may be due to other non-traumatic causes. Hematosalpinx may occur independent of pregnancy, and rupture either spontaneously or from traumatism. Again, degenerated blood-vessel walls, and especially veins, may rupture under similar circumstances.

M. E., aged twenty-four, nurse, admitted to the German Hospital January 20, 1893. While lifting a heavy weight from an elevator she felt something give way in her abdomen. This was immediately followed by severe lancinating pain in the right ovarian region. She was menstruating at the time. Pelvic peritonitis promptly set in. An examination demonstrated a tumor in the right broad ligament about the size of a hen's egg. The peritonitis and tumor subsided to treatment, and she made a slow recovery. Diagnosis, pelvic hæmatocele from rupture of an engorged ovarian vein.

Hemorrhage itself is seldom the cause of death, but associated as it is with shock, the degree of which is out of all proportion to the severity of the accident, it is frequently fatal in a very short time. When the peritoneum is wounded shock is still more profound, the so-called peritoneal shock.

Hemorrhage within the peritoneum is sometimes very slight and distinctly localized, and may occur several times during the course of the illness. It may take place between the layers of the broad ligament and soon stop from the pressure.

I report the two following cases of hemorrhage from my list of operations for ruptured extra-uterine pregnancies, as they illustrate so typically the wisdom of immediate operation:

Mrs. A. K., aged thirty-one, admitted to the German Hospital September 21, 1894, with the following history. Six months prior to admission she had been subject to attacks of vertigo, pain in the back and limbs, and for the last six weeks to a constant bloody vaginal discharge. Examination revealed a retroflexed uterus with a slight tear of the cervix and the presence of a small movable mass behind and to the left of the uterus.

September 25th, four days after admission, the patient was etherized and the uterus was dilated and curetted. After the operation the discharge stopped, but the patient gained in strength very slowly. She was advised to submit to abdominal section, but preferred to wait until she was stronger. On the night of November 22d she awoke with a severe pain in the right side, and on attempting to walk to the water-closet fainted. After being returned to bed she again fainted and went into a collapse, the pulse becoming almost imperceptible and the temperature falling to 96°. Under active stimulation she reacted. The diagnosis was made of internal hemorrhage from rupture of a probable extra-uterine pregnancy.

The abdominal cavity was found filled with fluid blood and clots and the right tube ruptured. The tube was tied off and the abdominal cavity flushed with hot saline solution, a glass drainage-tube introduced and the wound closed. The patient was not much shocked by the operation, but on the contrary seemed rather improved. The drainage tube was removed on the third day, the wound healed by first intention, and the patient made a good recovery.

Mrs. J. W., aged thirty-six, was admitted to the German Hospital November 21, 1894, with the following history. About two o'clock on the morning of admission she was seized with a violent pain in the lower abdomen. For this she took some whisky and was somewhat relieved. At nine o'clock the same morning she

started for market .and was suddenly taken sick, becoming very weak and suffering from a violent pain in her abdomen. She returned home with difficulty and called in Dr. Hand, who advised her immediate removal to the hospital. At the time of admission she was very weak, and there was distinct tenderness over the abdomen with slight dullness on the right side. Immediate operation was advised and consented to.

When the peritoneal cavity was opened it was found to contain fluid blood and clots. The right tube was the site of a small rupture and was tied off and removed. The abdominal cavity was washed out with hot saline solution, glass drainage introduced and the wound closed. The patient was very much shocked by the operation and reacted slowly. During the operation hypodermatoclysis was practiced. The drainage-tube was removed on the fourth day, the wound healed by first intention, and the patient was discharged, well, on the twenty-third day.

The following case of hemorrhage from ruptured extra-uterine pregnancy illustrates the danger of delay as strongly as did the two previous cases the efficacy of prompt interference:

Mrs. P., aged thirty, was a patient of Dr. S. Cooke Ingraham, of Wissahickon, this city, who furnishes the following history:

I first saw the patient on January 29, 1892. She complained of severe abdominal pains of a bearing-down character and of a sense of fullness in the epigastric region. She had been married seven years, but had never been pregnant and laughed at the possibility. For the past three years the menstrual flow had been decreasing in amount and for several months past had been very scant. The breasts were slightly enlarged, but the areolæ were not darkened. The glands of Montgomery were a little more prominent than normal. She had suffered from morning vomiting for the past month.

I was hastily summoned to see the patient on the morning of February 2d, and found her in a state of collapse, pulseless and with a temperature of 96.5°. She reacted to active stimulation and was sent to the German Hospital for immediate operation, a diagnosis of ruptured extra-uterine pregnancy of the tubal variety having been made. Upon admission her pulse and temperature were normal. She did not complain of pain. Examination of the abdomen and per vaginam and rectum failed to reveal any mass, although a circumscribed area of flatness could be demonstrated low down and to the right side. She continued in this condition until February 12th, when at her own request she was discharged. On February 23d she was readmitted at Dr. Ingraham's earnest request. At the time of the second admission the abdomen was markedly distended, being tympanitic above and flat below. Pulse 116, .temperature 101.5°. She complained of considerable pain.

The following day she was operated on, and when the peritoneum was opened a fetus with clots and fresh blood gushed out. The ruptured sac occupied the right iliac region and was tightly adherent to the neighboring coils of small intestines, to the cecum and to the vermiform appendix. After a prolonged and tedious dissection the sac was enucleated; this was accompanied by very free bleeding, which necessitated packing of the cavity with gauze. The wound was closed with the gauze packing *in situ*. The patient died the following day of hemorrhage.

The immediate effects of an injury severe enough to cause a serious lesion of an abdominal viscus are sometimes so slight as to be misleading. Very often a patient with such a condition will walk to a conveyance or to the hospital, complaining only of a slight pain. In varying periods of time following the injury more decided symptoms will develop, viz., signs of hemorrhage if the solid organs be involved and early peritonitis if the hollow viscera be ruptured or torn sufficiently to allow their contents to escape. When this occurs operation is imperatively demanded without delay. This is also true of hemorrhage consequent upon the rupture of an extra-uterine .pregnancy, be it traumatic or spontaneous. In ectopic gestation operation will be necessary in every case at some period of its history; therefore if a diagnosis can be made, or even a well-founded suspicion of the condition exists, rupture should not be allowed to occur. If rupture does occur, however, immediate interference is the only certain means of saving the patient's life. The longer the operation is deferred the greater the risk to life. Hasty operations,

often necessitated by the patient's condition, are likewise less liable to reach a favorable termination. Blood-clots or intestinal or gastric contents cannot be washed out of the peritoneal cavity except by prolonged and repeated flushing.

The almost universal fatality of intra-abdominal lesions of traumatic origin is so well recognized that it seems as if there could hardly be any question as to the wisdom of opening the abdominal cavity. I would not be understood as meaning that abdominal section should be used as a means of diagnosis, but on the contrary I believe that every known means, with attention to the most minute details, should be exhausted in establishing a diagnosis. When a diagnosis is impossible abdominal section is justifiable only when it becomes the last and only chance for the patient.

I have refrained from using the terms exploratory and diagnostic incisions, believing that they not infrequently serve as a shield to cover a lack of diagnostic ability. It is a moral obligation resting upon every physician and surgeon to develop to the utmost of his ability the highest diagnostic attainments.

Aseptic surgery has undoubtedly been one of the greatest boons to humanity that this nineteenth century has brought forth. But to me it seems that it affords a great temptation to men who have not had experience and surgical training, and who have, therefore, not fully developed their diagnostic skill, to do operations which are not necessary for their patients' good or with a scientific precision.

A CASE OF MALPRACTICE.

P. J. FARNSWORTH, M.D., CLINTON, IOWA.

The Spitz dog of a highly respectable family of this city had a difficulty with his throat. Respiration impeded; deglutition difficult. The carriage was ordered out and Tip was taken to a leading surgeon. The latter diagnosed stenosis or tumor of the larynx in the neighborhood of the vocal cords, as Tip's bark had sailed away and was lost at C.

An examination confirmed this diagnosis, and under chloroform an operation was performed. The dog died. At post-mortem examination it was found that some one had slipped over his head a rubber band such as druggists use to tie up packages. It had worked through the hair and bedded itself in the skin. In any case it was the cause of the dog's death, and the bereaved are now querying where to fix the blame.

DEATH FROM URETHRAL INJECTION OF COCAINE.

In this case the patient was aged seventy-two, with heart disease, atheromatous arteries, and subject to angina pectoris. He had also an enlarged prostate, which caused retention. Attempts at catheterization failed, and puncture was resorted to. The next day catheterization having again failed, suprapubic cystotomy was decided on; but a last attempt was made to pass the catheter under cocaine. Twenty grams (!) of a 5 per cent. solution was injected into the urethra. Immediately the patient became pale, general trembling set in, he sat up in bed, commenced to vomit and fell back dead.

In a report on the case Dr. Reclus says that, remembering the absorptive power of mucous membrane, it is not surprising that one gram of cocaine injected into the urethra should cause death, and the large quantity employed was the sole cause in this case. It had already been said down that 15 to 20 centigrams should not be exceeded, and that the solution should not be more concentrated than 2 per cent. It was also pointed out that the recent injury done to the urethra would largely contribute to the rapid absorption that evidently took place.—*La Sem. Med.*

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

SALICYLIC ACID BY THE RECTUM.

Dr. Erlanger (*La France Médicale*, No. 1, 1895) from experiments on a large number of rheumatic patients at the Munich Hospital, finds that one may employ rectal injections of solutions containing salicylic acid with advantage in treating this disease. Absorption, he has observed, is somewhat slower by this method, though the results are as satisfactory as when given by the mouth. He sets forth the following rules for its administration:

The rectum should first be emptied by a preliminary injection; the solution should be lukewarm. The most convenient formula is the following:

Salicylate soda.....	6-8	o	ʒ jss-ij
Tr. opium.	1	o	gtts. xv
Water.....	100	o	ʒ iij ʒ j

The solution should be thrown high up into the bowels by means of a rubber œsophageal sound attached to a syringe. The patient must be instructed to retain the clyster.

TREATMENT OF SYPHILIS IN CHILDREN.

Dr. J. Simon (*Revista de Ciencias de Medicas de Barcelona*, No. 23, 1894) with regard to prophylaxis, recommends advising against matrimony in subjects with contagious primary and secondary symptoms; to require a free after-period of at least twenty months, during which there are no visible syphilitic symptoms; to prohibit marriage in those with rebellious tertiary symptoms with visceral lesions. During the pregnancy of syphilitic mothers, administer mercury in small but continuous doses. Recommend nursing energetically, for "a woman who has brought forth a syphilitic child will not be infected by her child during nursing" (Colles' law). In case of impossibility, seek a syphilitic nurse, but never give it to one who is healthy. In case of necessity feed with mother's milk by the bottle. In children of five to six weeks, give during the day Van Swieten's solution, 20 gtts. four times a day in milk. At the same time give inunctions of mercurial ointment (0.50:2.) morning and evening. One inunction a day will, however, suffice. On going to bed is the best time. Change the regions where applied from one side to the other. This treatment should not, as a rule, last longer than four weeks. The dose of Van Swieten's solution may be decreased, increased or interrupted from time to time. Indirect treatment may be instituted by administering the mercury to the mother or nurse. If she be syphilitic, then give her the iodide of potash and apply mercurial ointment by inunction to the child. In case of protuberant osseous tumors, apply Vigo's plaster. Separation of an epiphysis requires fixation in an immobilizing bandage until consolidation takes place. If it has completely separated from the rest of the bone, then remove it as if it were a foreign body.

FRESH MEAT-JUICE IN DISEASE.

Professor v. Ziemssen (*Wiener Medizinische Presse*, No. 52, 1894), the celebrated clinician of Munich, speaks very highly of freshly expressed meat-juice as a food in disease. Those patients who find the bloody taste repugnant, may easily have this disguised by adding a little brandy and extract of vanilla with sugar, and upon freezing it an agreeable ice-cream is formed which is eaten by the most fastidious with pleasure. In this manner administered there will be no difficulty in giving a patient at least 200 grams (ʒ vjss) of the juice, and, indeed, even to those patients who have a disgust for all other forms of food or who cannot retain food, as typhoid cases.

CHLOROFORMIZATION BY THE DROP-BY-DROP METHOD.

Dr. C. G. Bremer (*Vratch*, No. 52, 1894) communicates the results of his experience with the drop-by-drop method in administering chloroform as an anesthetic in 1,000 cases. He concludes that anesthesia is much less disagreeable for

* In charge of the translator, F. H. Pritchard, M.D.

the patient; excitement is less frequent; the patient comes more quietly under the influence of the anesthetic, and vomiting is less frequent during its administration. The quantity of chloroform required for complete anesthetization of an adult, is between 17.5 and 21.5 grams instead of 100–200 grams as by other methods. He has found that the anesthetic may be continued for several hours without danger; vomiting, headache and other disagreeable symptoms following awakening are less frequent, while accidents are infrequent.

STROPHANTHINE.

Professor v. Ziemssen (*Muenchener Medicinische Wochenschrift*, No. 50, 1894) says that strophanthine, though not so lasting in its action as digitalis, is preferable to the tincture of strophanthus as a substitute for digitalis; both, in the tincture, had best be cast out of the Pharmacopœia on account of their unreliability. Digitalis he would have used only in infusion or powder. Strophanthine is not cumulative in its action. He administered it in a dose of 0.001 (1/60 gr.) twice a day.

OINTMENT OF RED OXIDE OF MERCURY IN VARICOSE ULCERS.

Dr. H. Langes (*Muenchener Medicinische Wochenschrift*, No. 48, 1894) speaks highly of treating varicose ulcers of the legs with an ointment of the red oxide of mercury. The officinal ointment he has found to be too strong (one part of the red oxide of mercury to nine of vaseline), so that he mixed it with one to two parts of vaseline. The influence upon suppurating wounds was apparent in a short time, not only upon suppuration, but also upon the development of healthy granulations. The first day the patient usually complains of violent pains, which by the third have entirely or nearly disappeared; at the same time the bottom of the ulcer will assume a healthy appearance and vigorous granulation and cicatrization will follow. With the mixed preparations of the ointment the reaction was less violent, but healing also took place, but less rapidly. The dressing should be renewed once a day and the salve be spread upon a piece of cloth to the thickness of a knife blade; a flannel or small bandage may be used to wrap the extremity. Rest in bed will accelerate the healing process.

TREATMENT OF TAPEWORM.

Professor Potain (*L'Union Médicale*, No. 30, 1894), in a lecture on the tapeworm and its treatment, among the long series of remedies which have been proposed finds but few which are actually reliable. They may be divided into indigenous and foreign; among the latter are kousso, musenna and kamala. Kousso is an excellent remedy, but it is so easily altered that it is of not much practical value. The male fern, an indigenous remedy, is especially employed in expelling the bothriocephalus. The ethereal extract is used as well as the powder and the decoction. One may administer 2 grams (grs. xxx) of the ethereal extract mixed with 3 grams (grs. xlv) of the powder, after which one may take a decoction of 3 grams (grs. xlv) of the powder in 100 grams (℥ iij ʒ j) of water. Two hours after 2 ounces of castor oil are given. In certain cases pumpkin seeds will yield good results; those of the cucurbita maxima are best used, as the smaller varieties are harder to obtain and give less satisfactory results. Take 250 grams (℥ viij) of the seeds, which after extracting the kernels will leave about 50 to 60 grams of hulled seeds. These are rubbed up with sugar to form a paste, or with milk to make an emulsion. The evening before the patient should be put upon a milk diet and the seeds ingested the following morning. Two hours after follow with a purgative. Squash and gourd seeds are only indicated in individuals with susceptible digestive tracts; they will yield but uncertain results.

The true and most efficacious remedy is the bark of the roots, trunk and young branches of the pomegranate; the dose is 60 grams (℥ ij) of a not too old bark, which is macerated for twenty-four hours in 750 grams (℥ xxiijss) of water, which is later reduced by slowly boiling to 500 grams (℥ xvss). This should be taken in two portions, with an interval of ten minutes, and then followed with 60 grams (℥ ij) of castor oil as soon as the patient feels a little motion in the abdomen. If the oil be given too early, the worm will not have been stupefied; if too late the head will remain. This drug may cause vertigo and

roaring in the ears, which symptoms are still more prominent with pelletierine, a glucoside extracted by Tanret. The sulphate is usually employed, but it has the inconvenience of being absorbed by the stomach and in acting upon the patient and not upon the worm; therefore Tanret has mixed it with the sulphate of tannin to retard absorption. The patient, from the evening before having been upon a milk diet, takes 30 cgms. (grs. ivss) in two doses, with a half-hour of interval; then after about an hour a purgative is administered. If this does not act, a purgative rectal injection is indicated. Out of 100 cases, one will obtain successful results in about 79. This alkaloid also gives rise to vertigo, roaring in the ears and a sort of very marked "drunkeness." All these symptoms will be less intense if one take care to keep the patient in bed. In case of failure do not repeat the remedy until the sections reappear in the stools. It seems, in some cases, as though the worm became accustomed to this drug.

A CASE OF TETANUS IN A PREGNANT WOMAN.

Dr. Augustin (*Spitalul*, No. 17, 1894) recently reported the case of a woman who, in the seventh month of pregnancy, suddenly developed tetanus after taking cold, and who was cured spontaneously in a month. Pregnancy was not interrupted, and she was delivered of a healthy child at full term. He proposed premature labor, but she refused and was taken from the hospital after receiving a few rectal injections of chloral and the bromide of potash, together with two hypodermics of pilocarpine. At home, in the country, she recovered without any treatment beyond rubbing her head with brandy. He calls attention to the possible gravity of this disease for both mother and child.

FEVER OF TUBERCULOSIS IN CHILDREN.

Dr. Rachford (*Covremennaya Klinika*, No. 10, 1894) in treatment of the fever of tuberculosis, and particularly that of the lungs, in children, advises the following salve:

Guaiacol	āā	4	o ʒj
Lanoline			
Lard		30	o ʒj

Rub a little of the salve of the size of a hazel-nut into the region of the chest each evening.

TREATMENT OF NEURALGIA.

Professor Dujardin-Beaumetz (*Revue Internationale de Médecin et de Chirurgie Pratiques*, No. 17, 1894) recommends the employment of antipyretics which are at the same time analgesic. Phenacetine may be given in doses of ½ to 1 gram (grs. vijss–xv) in two to three powders in twenty-four hours. In migraine, antipyrine is to be preferred; in lightning-like pains, pains from pressure and pains of dental origin, give acetanilid. In essential neuralgia, exalgine is preferable. Phenacetine is of greatest service in the painful affections of neurasthenic and neuropathic subjects. Antipyrine may be administered in doses of 1 to 4 grams (grs. xv–ʒj) in twenty four hours, either in powder or in a grog. The fulgurant pains of tabes are best controlled by acetanilid. Give 1½ grams (grs. xxijss) in three powders during twenty-four hours.

BICHROMATE OF POTASH IN GASTRIC AFFECTIONS.

Professor Fraser (*ibid.*) has employed bichromate of potash in 18 cases of simple dyspepsia, and 10 cases of ulcer of the stomach, in doses varying from 5 mgms. to 1 cgm. (1/12 gr: 1-6 gr.) three times a day, either in pill form or in a watery solution to which has been added a little syrup of tolu or orange and taken before meals. A few days after its use, all the dyspeptic symptoms, the pains, nausea, vomiting, etc., decreased in severity or disappeared completely. He rather ascribes the results to a particular action upon the gastric mucous than to any antiseptic influence.

INDICATIONS FOR COLD BATHS IN DISEASES OTHER THAN TYPHOID.

Dr. Wiart (*Gazette des Hôpitaux*, No. 50, 1894) sets forth the following indications for cold baths in various diseases, not including typhoid fever:

General indications—

1. When the urine is scanty, dense and charged with albumin.
2. When there is elevation of temperature.
3. When there are grave nervous symptoms even without high temperature.

4. When the heart is failing.

Special indications—

1. In erysipelas and particularly in the severe and typhoid forms. Cold water will not arrest the course of the disease, but it will calm the pains, reduce the nervous symptoms and shorten the period of convalescence. Renal complications give a second indication especially.

2. Small-pox is a disease where writers disagree as to indications. Vinay and Juhel-Renoy administer cold baths from the beginning, thus claiming a decrease of severe symptoms and find no contraindication in the eruption. But Vinay, after suppuration commences, only employs a bath of 28° C. Clement only begins to give baths at this period. In the hemorrhagic form the results were nil; in the confluent and coherent varieties the mortality was lowered.

3. Scarlet fever in the adynamic or atonic forms is only to be treated by cold baths. Renal, cardiac, pulmonary, articular and hemorrhagic complications do not contraindicate.

4. Measles are only to be treated thus in the anomalous forms.

5. Pneumonia and broncho-pneumonia in France are thought only exceptionally to be treated by cold baths. In children, when the general symptoms become serious, they will possibly sustain the patient and lower the temperature, yet they are not curative measures.

6. In cerebral rheumatism in the acute form it is the only efficacious treatment; in the apoplectic variety it is without effect. Put the patient into very cold baths, repeat them frequently and prolong them; massage energetically and give alcohol in generous doses. Thus one may lower the temperature from 42° to 37° C. in forty-eight hours. Montagne and Amblard have also treated cerebral gout with high temperature by cold baths with success.

7. Puerperal fever requires the cold bath in the acute septicemic forms with typhoid symptoms.

8. Exanthematic typhus, when there are high temperature and general nervous phenomena, necessitates these measures.

9. Finally, cold baths have been employed with success in grippe in a malignant form, tetanus, infectious icterus, hepatic colic with profound adynamia, and nephritis.

IS THE BABY TONGUE-TIED?

Dr. Chervin (pamphlet, Paris, 1894), the director of the Institute for the Treatment of Stammerers at Paris, has made an interesting study of the surgical aspect of this subject. Much performed in certain regions of France and formerly often done by some of the greatest surgeons, he thinks that its use has a very limited application; for example in those rare cases where the tongue is bound down to the floor of the mouth by an inferior ankyloglossia so that the tongue is immobilized. In certain cases where the frenum is too long and by extending even to the tip of the tongue interferes with nursing, then not a mere incision, but an excision is required. This is exceptionally necessary, and though in itself insignificant, it may present serious danger in a little child. It is wrong to think that if an infant nurses badly its frenum must be cut. A little exercise upon the end of one's finger will correct this fault and operative interference will be unrequired. Cutting the frenum is absolutely useless in correcting defective pronunciation, for this is only to be remedied by a methodic education of the voice by natural and rational exercises which will not exceed three weeks.

OBLITERATION OF THE SUPERIOR VENA CAVA AND ITS TREATMENT.

Dr. F. Merlin (*La Loire Medicale*, No. 4, 1894) records an interesting case of a man of thirty-four years, who presented all the classic signs described by Oulmont as characteristic of obliteration of the superior vena cava—œdema of the face, neck and upper portion of the thorax, but which was less marked in the arms; cough and attacks of dyspnœa, cyanosis, vertigo, headache and signs of cerebral congestion. He was put upon antisyphilitic treatment, 4 grams (ʒ j) of the iodide of potash a day, with local application of iodine to enlarged glands at the root of the neck behind the sternal fascia. Though the patient denied having had syphilis, the result confirmed the suspicions which were verified later. In one month all the symptoms were relieved; the œdema, cyanosis, dyspnœa and the accompanying deafness were cured and remained so definitely, as the writer was able to observe four years later.

INSUFFLATION OF AIR IN TUBERCULOUS PERITONITIS.

Dr. Folet (*Le Nord Medicale*, December 15, 1894) treated a case of tuberculous peritonitis with ascites by puncture, evacuation of six quarts of serous fluid and insufflation of three quarts of air, which method had been proposed some time ago by Mosetig Moorhof, of Vienna, with the difference that this writer advised injecting filtered air, while in the former case the air of the room was insufflated unfiltered. A recovery followed which has endured for nine months. It has been suggested to employ a similar procedure in tuberculous pleurisy.

TREATMENT OF ANGINA PECTORIS FROM TOBACCO.

Dr. J. Crook (*Le Semaine Medicale*, No. 1, 1895) recommends for the treatment of angina pectoris in tobacco-users, the following preparation:

Alcoholic solution trinitrine, 1 p. c.			gtts. xv
Fl. extr. cactus grandiflorus.	8	o	ʒ ij
Hoffmann's anodyne.....	2	1	ʒ v gtts. xv

Sig.: Thirty drops three times a day in a little water.

If necessary the dose may be increased gradually to sixty drops.

IODINE AND SALICYLIC ACID IN DIPHTHERIA.

Dr. Kersch (*La Semaine Medicale*, No. 1, 1895) claims as good results as with the antitoxine treatment, with the following formula in diphtheria:

Iodide sodium.....	3	o	grs. xlv
Salicylate soda.....	5	o	ʒ ji-4
Water.....	200	o	ʒ vj ʒ ij
Raspberry sirup.....	30	o	ʒ j

Sig.: A tablespoonful or two, if there is great urgency, every hour.

Out of 17 cases treated thus he lost 3. He excludes 2 cases where treatment commenced when there was intense cyanosis with orthopnœa and cardiac weakness. Under the influence of this treatment the false membranes were rapidly thrown off, and they gradually ceased to reappear. There is no danger of serious iodic symptoms.

A New Operation in Internal Hemorrhoids.

Dr. Janes (*Provincial Med. Jour.*) reports a new method for treating internal hemorrhoids by means of a clamp and suture instead of the cautery. After divulsing the sphincters he seizes each hemorrhoid and applies the clamp to its bone, cuts away the pile and approximates the mucous membrane of the stump with catgut sutures as follows: The ligature is threaded with two needles. Beginning at one end of the wound, one needle is made to transfix each side of the mucous membrane; then by means of a double continuous suture the surfaces are united with a cobbler's stitch, and in addition each time the needles are drawn through an overknot is tied. This form of suture is unique, as it prevents any possible bleeding and greatly lessens the risk of the deeper part of wound becoming infected.

Flatulence.

For flatulence in children Ringer recommends:

Tinct. asafœtidæ.....	fl ʒ ss
Aq. destill.....	fl ʒ ij

M. Sig.: A teaspoonful every hour or two.

For flatulence due to fermentation:

Acidi sulph.....	fl ʒ jss
Syr. zingiberis.....	fl ʒ vjss
Aq. destill.....	fl ʒ j

M. Sig.: A teaspoonful.

Influence of Habitual Inclination of Pelvis on the Pelvic Canal.

Hirst (*University Medical Magazine*) points out that although the pelvic obliquity on account of its normal variations can generally be neglected in regard to childbirth, the influence of habitual inclination of the pelvis on the development of the pelvic bones and pelvic canal has been neglected. Exaggerated inclination of the pelvis in childhood so that the trunk weight is received by the sacrum increases the forward rotation of that bone, diminishing the antero-posterior diameter of the inlet and the depth of the canal, while excessive action of the rotator muscles of the thigh tends to widen the outlet. On the other hand, if the pelvic inclination is diminished, the top of the sacrum is pushed backward, the antero-posterior diameter of the inlet is increased, as is also the depth of the canal; while pull on the ilio-psoas muscles, separating the iliac bones apart, and by compensatory displacement of the ischia, narrows the transverse diameter of the pelvic outlet.

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SATURDAY, FEBRUARY 9, 1895.

EDITORIAL.

THE CHOICE OF AN ANÆSTHETIC.

The precise clinical value of any anæsthetic is settled by the practitioner or clinician and not by the experimenter. Unfortunately for the profession, the controversies as to the relative values of the different anæsthetics and which should be the one of choice from the standpoint of both safety and effectiveness, is largely due to uncertain utterances coming from laboratories. The relative clinical merits and demerits of the anæsthetic agents commonly in use, have long since been settled by active surgeons.

The early and free general use of chloroform resulted in precise knowledge of its risks and its great value in the hands of trained surgeons. Chloroform was and is safely used by trained anæsthetizers. Accidents, which are not common, are usually due to culpable carelessness and ignorance. The general, almost exclusive, use of chloroform by two of America's most prominent surgeons, Gross and Hunter McGuire, should go farther in settling the problem and should have more weight than the opinions of all mere experimenters whose notions, not experiences, find conspicuous place in medical literature.

The surgeon who knows it, and uses it night and day in the most difficult operations, has a right to speak plainly as to its great value, for he voices the lessons of his own work, the results in his own professional experience.

The laboratory practitioner, destitute, as he usually is of clinical and applied knowledge, is not a reliable authority, and in many instances has worked mischief. It is the man who has done and does put an anæsthetic to repeated practical tests, who can speak with the best authority.

Smothering cats or dogs with either chloroform or ether, paralyzing heart or respiratory centres; or water-logging kidneys or lungs in the human subject, is not surgical anæsthesia. Animal experimentation does not furnish a safe guide, for

here the anæsthetic is pushed to the point of death, or, where not, the conditions maintained furnish little of value in the line of surgical teaching. Any anæsthetic that deadens sensation, or paralyzes the respiratory or circulatory centres, if ignorantly or carelessly pushed beyond perfect anæthesia, will kill.

Chloroform may be, and has been used for prolonged and complicated operations in feeble, exhausted and anemic patients, without accident or unfavorable results. Commonly ether also can be prolonged without working mischief. Facts demonstrate that the lack of clinical knowledge prevents their absolutely safe use. About all recorded accidents, and the very many unrecorded, have been largely due to ignorance and inexperience. The number of deaths ultimating from the use of ether is probably greater than that of speedy deaths occurring from chloroform. A number of the deaths occurring in the first five or ten days following an operation, from pneumonia, edema of the lungs, suppression of the urine, etc., are directly chargeable to a reckless use of ether. Rarely is anything said about the anæsthetic being the primary cause. The timid apprehension of the profession favors the use of ether. It dreads accidents and still more that censure, professional and from without the profession, which follows sudden death. It must be granted that sudden death often occurs aside from the anæsthetic; shock, hemorrhage and other conditions must be taken into account. The profession knows perfectly well that chloroform kills quickly.

There is, in certain sections of our country, a very strong prejudice against chloroform, arising largely from the fact that the administration of the anæsthetic very frequently falls to the hands of untrained, inexperienced and incompetent men, thus greatly augmenting the risks. A surgeon who wishes to avoid anxiety must put either chloroform or ether in the hands of an experienced and thoroughly competent anæsthetizer. To be such requires long experience. A patient once under its influence can be kept safely for an hour with from two or three ounces of ether. Where complications accompany surgical conditions, many of our most successful surgeons make ether their choice, and find its administration by cautious and trained hands absolutely safe.

It is generally accepted that the surgeon should use that anæsthetic with which, in his practice, he has grown most familiar, and in the use of which he has had immunity from accident. Statistics in this connection are not reliable. In discussing the subject, Dr. Hunter McGuire, of Richmond, Va., who held an eminent position in the Southern army, and to-day is equally eminent among the surgeons of our country, says, in answer to the statement that statistics show that chloroform kills one in three thousand; ether one in ninety thousand: "We have no data or figures by which we can make such statements as to the number of deaths from chloroform and ether, and the number of times each anæsthetic has been given. So far as I am personally concerned, I think chloroform is safe as a rule, but we should select our cases. I venture to predict that when the experience of the civilized world is collected and analyzed, it will be found, if indeed it is possible to definitely settle such a question, that in certain cases ether should be given, and in certain other cases chloroform should be employed, and that every good surgeon will be expected to exercise discrimination in the selection of his anæsthetic. For myself I am wedded to neither of these agents. In general terms, in feeble, anæmic people, those suffering from the prostration of shock or loss of blood, I prefer ether; in either the young or the old, or in cases where cardiac, renal, or pulmonary trouble is suspected, as a rule I think chloroform is safer. That both agents sometimes kill the patient, the

most bigoted and partisan advocate of either ether or chloroform must admit. But which of the anæsthetics is more dangerous and apt to kill, is the paramount but undetermined question. I know I am within bounds when I say I have given chloroform 12,000 times; I give ether too. I think every good surgeon should select his cases. No one has a right dogmatically to give one or the other anæsthetic."

Bearing upon the subject we quote from Dr. Hamilton's "Legal System of Medicine."

"Ether the Anæsthetic of Choice.—We must be forced to the conclusion, in making selection of an anæsthetic, that ether, where it can be employed, is the anæsthetic of choice. Since Wunderlich has shown that the immunity from renal sequellæ formerly supposed to exist in chloroform narcosis has no foundation in fact, the last argument in favor of the employment of chloroform in place of ether, when the latter is not positively contra-indicated—as, for instance, by actually existing pulmonary conditions or in intracranial operations, in which class of cases ether seems to increase, while chloroform decreases the cerebral congestion; and in certain operations about the mouth and face where the galvano or thermocautery must be used or the mask frequently removed in the progress of the work—falls to the ground, when statistics showing the unquestioned safety of this anæsthetic agent as compared with chloroform are considered.

"A collection of yearly reports of narcosis covering 62 reports, making a total of 61,526 cases, shows after the deduction of 11,464 cases of nitrous-oxide anæsthesia, that there were 11 deaths in the remaining 50,062, or one in 4551 cases.

"The number of cases of anæsthesia collected during the past three years amount to 161,800, in which number there were 52 fatal cases, or one death in 3111 cases. Of 133,729 cases of chloroform anæsthesia there were 46 deaths, of one in 2907 cases. In 14,646 cases of ether narcosis there was not a single death. Of mixtures of chloroform, ether and alcohol (Billroth's) show in 3440 cases no fatality. In 4555 cases of bromide-of-ethyl anæsthesia there occurred one death. Of 597 cases of pental anæsthesia 3 were fatal.

"To sum up, therefore, it may be said that every patient to whom an anæsthetic is administered takes thereby some risk, but that this risk is less in ether than in chloroform narcosis. Each possesses especial advantages, but those claimed for chloroform relate chiefly to convenience, while those claimed for ether relate to comparative safety. The warning signals of approaching danger in ether can be recognized before the patient is beyond recall; in chloroform he is frequently already within the valley of the shadow of death before the anesthetizer is aware that anything is wrong. The surgeon, therefore, who at the present day selects chloroform as the anæsthetic of choice would do well to fortify himself with facts to show that ether is contraindicated in the particular case; otherwise the accusation may be made that an unnecessary risk was assumed in employing chloroform rather than ether, the patient dying from indubitable chloroform narcosis.

"More skill is required to produce ether narcosis than chloroform narcosis; more skill is required, also, to prevent the patient from dying from chloroform than from ether. An indifferently skillful anæsthetizer can easily kill a patient with chloroform, but he will not be able to anæsthetize properly with ether, much less destroy the patient without some warning which the operator himself would be likely to observe. With blood before him of a healthy hue, and the rhythm of regular and full respirations in his ears, the latter will feel safe as he proceeds in his work, if ether is used. Either of these failing, a word of caution to the anæsthetizer suffices to correct the undesirable condition. But if chloroform is employed the experienced operator knows only too well that the dark blood and absence of respiration mean that the heart has failed in its action, perhaps for several seconds or a considerable fraction of a minute before the dark blood and failing respiration occurred, and from this time on the most vigorous efforts must be made, with the chances greatly against him, to rescue the patient from death.

"Frequent attempts to punish surgeons for deaths occurring while an anæsthetic is being administered tend to damage, not only the profession, but society at large. The great benefit which humanity has received from the use of these agents has been in danger of being nullified by fear on the part of the administrator, not only of damage to his professional reputation, but of being punished as well. Owing to the difficulties of excluding other causes of death in a particular case, fatal narcosis is not easy to establish. This is particularly true where the operation has advanced sufficiently far to allow the element of shock to enter into the case. Reflex irritation of the cardiac centers, giving rise to lessened force combined with acceleration and intermittency, this eventuating in the arrest of the heart's action occurs especially when chloroform is administered. The sudden breaking up of adhesions within a joint, or dilatation of the anal sphincters has not infrequently been followed by the development of dangerous symptoms. Where the element of shock enters largely into the condition there can be no question as to the freedom of the surgeon from responsibility in the sudden collapse.

"Renal affections may result from either chloroform or ether. Contrary to what has been generally supposed, Wunderlich has shown that the latter agent is not alone in its supposed damaging effects upon the kidneys From his extended observations of the effects of the two anæsthetics upon the renal organs, he makes the following deductions: (1) An already existing albuminuria is often increased by etherization. (2) Albuminuria can be caused by narcotization with both chloroform and ether, but more frequently with chloroform. With the latter this resulted in 11.5 per cent. of the cases, with ether it occurred in only 6.9 per cent. (3) Casts appeared in the urine after both chloroform and ether, but more frequently following the former. This occurred after chloroform in 34.8 per cent. of the cases, and followed ether in 24.6 per cent. of the cases. (4) When casts are already present, both ether and chloroform have the effect of increasing the number. It follows, therefore, that both anæsthetics must be used cautiously, as both have the power of setting up degenerative changes in the renal epithelia.

"According to Bardeleben, excitement and fear before and during the administration of the anæsthetic do more harm than the latter, whatever its nature.

"When accusations are made that unusually large quantities of the anæsthetic agent have been used it would be well to bear in mind Mair's statements bearing upon this point. The author states that patients have inhaled 160 grams of chloroform in seven hours; 1023 grams in twenty-four hours in another case; in another, suffering from tetanus, 700 grams in twenty-four hours; in another 1000 grams in twelve hours; a woman in the puerperal state remained chloroformed for thirteen hours, 200 grams being used."

ABSTRACTS.

RECENT VIEWS ON SEA SICKNESS.

In a review of this subject by Dr. Skinner (New York *Medical Journal*) the author comes to the following conclusions:

1. The principal symptoms of naupathia result from the lowering of the patient's arterial blood pressure. This is a condition sine qua non of their development.

2. Seasickness in a person otherwise healthy and not too aged is promptly curable in the vast majority of cases.

3. Even in aged persons, or in persons having certain affections of the circulatory apparatus, there is often amelioration of the general condition by the employment of the new method of treatment.

4. The treatment consists in the hypodermic injection of from half a milligramme of atropine sulphate, associated with a milligramme of strychnine sulphate (or nitrate) dissolved in a cubic centimetre of distilled mint water.

5. The administration of these eminently toxic substances demands a great degree of attention, prudence and supervision on the part of the physician, who alone should be the judge of the opportunity of their administration and of their dose in each individual case. Given at proper times and in suitable doses, however, no harm whatever will follow their administration.

6. The sympathetic nervous system plays a preponderating role in the causation of naupathia.

7. Naupathia, or seasickness—an affection without known anatomical lesions, and of which the predominant symptoms have their origin in the nervous system, and especially in the sympathetic or ganglionic nervous system—ought to be regarded as a neurosis of the sympathetic.

8. This neurosis may recur during the course of a long voyage, but each attack is almost always amenable to the same treatment.

SALOPHEN IN DISEASES OF CHILDREN.

Dr. Richard Drews (*Allg. Medecin. Central-Zeitung*) has treated with salophen 15 cases of acute articular rheumatism in children varying from 7 to 14 years. In 5 cases one or both knee-joints were affected, in 4 both ankles, in 4 both shoulder joints, and in 2 all the joints of one side of the body. The remedy was administered in accordance with the age in doses of 0.3 to 0.5 gm. every 2 hours, and 3.0 to 5.0 gm. pro die, and in no instance was any influence upon the heart noted. In the majority of cases the pains were already relieved on the first day and vanished completely at the end of 3 or 4 days; the temperature always fell to normal in the course of 3 or 4 days coincidently with the subsidence of the swelling. In 12 out of the 15 cases profuse perspiration occurred about half an hour after the exhibition of salophen which, however, had no effect upon the general condition. Aside from this no after effects of any kind were observed. An extension of the affection from one joint to another did not occur; in 2 cases, however, 3 or 4 days after subsidence of the swelling a recurrence ensued which again disappeared after 3 days' use of the remedy. Salophen therefore has the same effect in acute articular rheumatism as salicylate of soda, while free from its unpleasant sequelæ, such as gastric disturbances, tinnitus, vertigo, cardiac depression. An equally satisfactory result was obtained in 5 cases of severe acute muscular rhematism of the muscles of the neck in which a cure was effected at the end of 3 days. In a case of purpura rheumatica in a girl of fourteen years old, salophen in 0.5 gm. doses every 2 hours also had a favorable action upon the pains, fever and eruption. A

case of chorea is reported in which under administration of 5.0 gm. doses pro die for 12 days the choreic movements, as well as a coincident systolic murmur, disappeared completely. As an antipyretic salophen proved serviceable in various febrile diseases, typhoid fever, scarlatina, pneumonia, tuberculosis, acute tonsillitis, the temperature being reduced 1.5 to 2 degrees C. in the course of half an hour. As an antineuralgic it acted admirably in a number of cases of migraine in children varying in age from eight to thirteen years, the pains being completely relieved by 2 or 3 doses of 0.3 to 0.5 gm. On the ground of his experience Drews therefore concludes that salophen is an excellent remedy in acute articular rheumatism, deserving preference over all other drugs in pediatric practice, that it is a useful antipyretic and an excellent antirheumatic. It was always well borne, and being tasteless can be administered without difficulty.

BOILING WATER—TREATMENT OF SURGICAL TUBERCULOSIS.

This treatment which was originated by Professor Jeannel about one and one half years ago, has since been employed by him with success, in cases of surgical tubercular disease, comprising ulcerations and abscesses of soft parts, as well as lessons of the bones and joints. Dr. Bauby, Professor Jeannel's *chef de clinique*, describes the procedure as follows: When one has to deal with an abscess of the parts or a lesion of the bony tissue, the tubercular focus and the fistulous canals are opened, and in an operable case of tubercular affection of the joints, typical resection is first performed. All the caseous products and granulations are carefully removed with the curette, the cavity is sponged out, and the blood completely staunched. In the meantime salt water has been kept boiling in a can of some sort (coffee-pot, tea-kettle or samovar), provided with a long spout or faucet, to which is adapted a long rubber tube with a pointed stopcock at its other free end. The jet is then turned on and, after the first contents of the tube have been allowed to run away, in order to heat the latter, the tubercular cavity is filled up with boiling water. The water is removed by sponging, after which the cavity is again filled with boiling water and emptied anew. This process is continued until the surface has been sufficiently cauterized.

A better procedure of boiling water treatment consists in pouring into the cavity cold or tepid water, and then heating it to the boiling point by insertion of the red-hot point of the thermocautery, the heat being maintained by continuously working the *pump*. One minute is sufficient to boil in this manner the water contained in the abscess, the size of a pigeon's egg. The water rapidly evaporates, leaving the cavity nearly empty. This process is repeated four or five times in succession. It is hardly necessary to say that, whichever method of boiling water treatment be employed, general anæsthetization is indispensable, except in cases of very small abscesses, in which cocaine anæsthesia may suffice.—*Med. Week.*

For Acute Coryza.

The *Medical Fortnightly* gives this formula for acute coryza:

Morphinæ sulph.	gr. j
Cocainæ hydrochloratis	grs. iij
Menthol	grs. vj
Pulv. acidi borici	ʒ ij
Bismuthi subnitratis	ʒ ij
Pulv. benzoini	ʒ iij

M. Sig.: Snuff a pinch up the nostrils several times daily.

Alumnol in Dermatology.

Dr. J. Abbott Cantrell (*College and Clinical Record*) says: "Alumnol has proven itself of decided advantage in my service at the Philadelphia Polyclinic, where I have advised its use in a hundred cases. It was found serviceable in acute vesicular eczema, erythema intertrigo, chronic eczema, non-syphilitic ulcers, ringworm and impetigo contagiosa. It was used in the form of powder, 1 part to 3 parts of starch, and as an ointment in strength varying from 20 grains to 2 drams to the ounce, and as a solution in the proportion of 2 drams to the ounce of water."

KEELEY CURES.

In *The Christian Advocate* of July 26, 1894, ministers and physicians among our readers were asked to assist us in obtaining accurate and impartial statistics of the results of the so-called Keeley cure of drunkards. The public has often been assured that ninety-five per cent. of the persons treated in the Keeley cures are cured or reformed, and that relapses are few. We stated that of those we had met four have relapsed, two committed suicide, and several others were in asylums; the sum total of these being more than fifty per cent. of the small number that we chanced to know. But as that might be true, and the statements made by the agents and managers of Keeley cures, who deal with a large number, might also be true, we deemed the subject of sufficient importance to collect statistics upon it.

The number of persons who have been inmates of the various Keeley institutions is large and scattered through all sections. So far as we can ascertain, at least seven thousand ministers and fifteen hnndred physicians, distributed over the United States and in foreign countries, are among our subscribers.

Our plan was this: We addressed three questions exclusively to ministers and physicians:

1. How many do you know who have taken the Keeley treatment?

2. Of those who have taken it, how many, to the best of your knowledge and belief, have remained sober and totally abstinent for a period of nine months or more?

3. How many have relapsed in less than that time, or have committed suicide, or become insane, or have been physically seriously injured by the treatment?

The explanation accompanying these questions were as follows:

Except in the case of personal acquaintances, we do not ask for information from subscribers in general because we would have no way of preventing the duplication of returns. By confining it to ministers and physicians we get one or two persons in a locality, and can correspond with them as to whether they have duplicated.

We wish no information from agents or managers of "Keeley cures" or graduates thereof. The former are excepted because of their business interests; the latter, because in that case we should get repeated information from the same locality. Neither do we wish mere hearsay information from ministers or physicians. If A tells B that he knows C; that C was a drunkard and was cured by a Keeley institute, and has never touched a drop of liquor since, and B tells us about it, it is of no value in this case. Nor do we wish names, but on the honor of a minister or physician we merely wish, as stated above, the number that he knows to have taken the Keeley cure, and what were the results. Nor do we wish this inquiry to be confused with any other "cure." Since Dr. Keeley began to be noted and to make vast profits, scores of imitators have sprung up, as is always the case; and he has a number of times declared that his institutes have been traduced by the fact that other graduates, who have lapsed, have been charged to them.

We will tabulate and publish the returns.

No sooner had this proposition been made than the Keeley Company sent us a long document denouncing our method, and containing severe attacks upon physicians, and indirectly upon ministers, as prejudiced persons whose testimony could not be relied on. This they say we may publish if we see fit, which we may do when we present the results. It will at least afford to the reader an opportunity of judging whether our exclusion of the company as a source of information was wise or unwise.

Various Keeley Leagues and Auxillary Associations passed resolutions accusing us of being prejudiced and declaring that our method of securing information is not adapted to elicit truthful returns. In various parts of the country circulars were sent to our ministers, urging them to be very particular to send the whole number of graduates that they knew, and other circulars especially stirring people up to send information favorable to the cure.

We suppose that ministers have no prejudice one way or the other unless employed by the company; that as a class, if they answer our appeal for information at all, they will tell the truth. And we be-

lieve that physicians, unless interested in some other system of treating such cases, will tell the truth. Further, we think ministers would be quite likely to come in contact sooner or later with a large number of permanent cures; for nothing is more talked about in a community than a genuine reformation from publicly known drunkenness. And we suppose that physicians would be most likely to come in contact with relapses, especially when followed by insanity, suicide and other conditions requiring care of treatment.

Some unsophisticated persons connected with Keeley institutions—before they heard the proclamation of hostility from headquarters—wrote us commending in high degree the simplicity of the plan.

It must be remembered that there are alleged to be hundreds of thousands of persons who have taken these treatments in every State in the Union.

Now we have not examined the results of our inquiries. Immediately after publishing the proposition, large numbers of letters began to arrive. We instructed the office editor to file them carefully.

The investigation, so far as we are concerned, will be terminated on the last day of March. At that time the tabulation of the returns, which will be made by disinterested persons, will be submitted to the editor. The result will then be announced.—*Christian Advocate* (N. Y.), Jan. 31, 1895.

THE ANTISEPTIC TREATMENT OF SCARLET FEVER.

Dr. W. Jamison (London *Practitioner*) says that there appears to be four points requiring consideration: (1) The course of the infectious principle, (2) the treatment of the throat and mucous membranes, (3) the management of the skin, (4) the value of the "so-called" complete isolation alone, as compared with antiseptic measures and restricted isolation.

1. There are three routes by which scarlatinal poison can enter the system: (*a*) by direct inoculation, which is rare; (*b*) by being swallowed, a more common source, the medium frequently being milk, a fluid in which the virus grows rapidly; (*c*) by inhalation, the most common method of transmission, Probably in all cases the first symptoms are manifested in the throat; the second, usually within twenty-four hours, as the eruption on the skin. It is almost certain that during the period of pyrexia the virus is multiplying in the blood, and is in process of being conveyed to the under surface of the skin. Deposited beneath the epidermis, it rises through its layers and is finally cast off in flakes of exfoliating cuticle. Dr. J. has seen desquamation commence on the fourth day, but in the majority of instances it manifests itself from the ninth to the eleventh day. The process of "peeling" is not completed, if uninterfered with, until the end of the eighth week. It is never absent in a genuine case of scarlet fever.

2. The best application to the throat is a spray of peroxide of hydrogen, ten-volume strength, repeated from three times daily to once in two hours. It should be continued, the intervals being extended, till its application no longer induces pain.

3. As regards the management of the skin, in the stage of exanthem we must favor the development of the rash by warm baths, which are best given at night, after which the entire surface must be smeared with eight ounces of almond or olive oil, containing a fluid dram of carbolic acid and two or four fluid drams of oil eucalyptus. When desquamation commences the warm baths must be supplemented by soap. Keep the patient in bed for three weeks, who should not be allowed to mix with others until peeling is completed and the hair washed several times.

4. Dr. J. is of the opinion that isolation alone cannot prevent infection, but no risk exists if the antiseptic precautions described are attended to. The nurse ought to wear a cotton wrapper, which can be laid aside when she leaves the room. The bed and body linen should be immersed in carbolic solution after being taken from the room.—*The Medical Progress.*

THE ADVANTAGE OF ATMOSPHERIC DISTENTION OF THE RECTUM, WITH DISLODGEMENT OF THE SMALL INTESTINES, IN THE BIMANUAL EXAMINATION OF UTERUS, OVARIES AND TUBES.

Howard A. Kelly (*American Journal of Obstetrics*), suggests a procedure for overcoming the embarrassment experienced by the crowding of the small intestines down into the pelvis and the consequent liability of making a false diagnosis of pelvic disease. Coils of small intestines in the pelvis containing fluid often feel tense and fluctuating, and thus readily impose themselves upon the examiner as large cystic ovaries, or leave him in doubt as to their true nature. The complete removal of these impediments may be satisfactorily effected in the following manner: The patient is placed in the knee-breast posture, with shoulders on the table and hips high and thighs vertical. The anal orifice is opened by a small speculum or tube, allowing the air to rush into the rectum, The explanation of this phenomenon is that, upon assuming the knee-breast posture, the small intestines gravitate along the anterior abdominal wall into the upper abdomen towards the diaphragm, creating a suction at the most elevated portion, which is the pelvic extremity, by means of which the whole ampulla and rectum balloon out with air as soon as the anus is opened, and the distended rectum applies itself broadly over the posterior surfice of the uterus and left broad ligament. Before making such an examination, both rectum and bladder must be thoroughly emptied. Immediately after filling the rectum with air the tube is removed, the patient placed in the ordinary dorsal position with limbs flexed upon the abdomen, and the bimanual examination made per rectum and abdomen. The index finger introduced within the anus experience at once the sensation of entering a large cavity filled with air, in which the customary resistance is absent. The communication with the upper bowel between the utero-sacral folds is, under these circumstances, readily found, and the finger is conducted behind the broad ligament, when, on using the outside hand in assistance, uterus, broad ligaments, ovaries and tubes are at once palpated directly through the rectal wall, without resistance and with startling distinctness. The true pelvic viscera thus seen, as it were, to be skeletonized in the pelvis, lying so clearly exposed to touch that the minuter surface peculiarities, fissures and elevations, and changes in consistence, can be detected, and a diagnosis made more satisfactorily, more rapidly and with far less effort than under ordinary conditions.

TEA INTOXICATION.

To speak of this beverage as "The cups which cheer but not inebriate," must be regarded as an instance of purely poetic license.

As the best work of the poet is likely to be produced when he is thoroughly intoxicated with his subject, this line may be regarded as of such origin. Certainly it belongs to the realm of poetic fancy rather than to that of scientific fact. And it may be claimed that its author, by his subsequent melancholia and suicide, demonstrated the danger of indulgence in this direction.

No one who has practiced among the poor of a large city can have failed to recognize the baneful effects of excessive tea-drinking, especially among sewing women. James Wood (*Medical News*) says:

Of 1,000 consecutive cases applying for general treatment at our largest dispensary, 100, or 10 per cent. were found to be liberal indulgers in tea, and suffering from its deleterious effects, and no one of which came for treatment of the tea habit, but for various other complaints. They were loth, when apprised of the cause of their

illness, to believe that such a harmless household commodity ever produced any bad effects. Of these 100 cases, 20 per cent. complained of persistent dizziness, 19 per cent. of indigestion, 45 per cent. of headache, 20 per cent. of despondency, 19 per cent. of palpitation of the heart, and 15 per cent. of insomnia.

When tea has been used for a considerable period in excess and its detrimental action has been constant, we have well-defined symptoms supervene, a few of which are such as vertigo, mental confusion, sensible palpitation of the heart, restlessness, insomnia, hallucinations, "nightmare," nausea, neuralgia, anorexia, constipation, prostration and anxiety, and a peculiar kind of intoxication ending after hours of vigil in a torpor from exhaustion.

What worse line of symptoms could follow the use of a beverage so commonly employed, it is hard to imagine, and that many people use it to excess is unquestionable. Many have confessed to an inability to "get through the day" without copious imbibitions of what is, in many cases, a strong decoction. Some drink every twenty-four hours as much as fifteen pints, and some there are who are unable to judge of how much they consume.—*Philadelphia Polyclinic.*

THE PRESENT POSITION OF THE LICHEN QUESTION.

This was one of the subjects submitted to the Dermatological Section of the International Congress in Rome, and the opinions expressed thereon by two of the speakers have come under our notice. Mr. Malcolm Morris, after an exhaustive review of the several statements made by authors of eminence since Willan's time, showing the confusion which even now reigns as to what is and what is not to be regarded as lichen, thus formulates his own conclusions as a contribution to the settlement of the question. (1) Lichen is not a disease, but a type of lesion. (2) The term should be reserved for the clinical entity described by Erasmus Wilson under the name of lichen planus, which is the same as Hebra's lichen ruber. (3) The affection described by Kaposi under the name of lichen ruber acuminatus is identical with that described by Devergie and Besnier as pityriasis rubra pilaris. (4) Other forms of lichen—obtusus, hypertrophicus, verrucocus, etc.—are variants of the typical form, the Hebra-Wilson typical lichen planus. (5) The group of symptoms to which the name of lichen planus is applied is probably caused by a variety of factors, but at present we are almost entirely in the dark as to its pathogenesis. (*Med. Press and Circular*, June 27, 1894.) Neisser, again, while he agrees with much of what has been said by Malcolm Morris, holds that, (1) Lichen ruber appears in two principal forms, which are to be distinguished as lichen ruber dianus (Wilson) and lichen ruber acuminatus. All other eruptive forms described under different names are modifications of this chief type. (2) Pityriasis ruber (Devergie Besnier) is a disease *sui generis* and a keratinosis, that is. a disease with essential anomalies of keratinization of an acquired character. At the same time he does not strictly adhere to the description of lichen ruber acuminatus given by Hebra, senior, nor to that provided by Kaposi, since he thinks that the two authors last named referred to entirely distinct diseases, the sole common element being the acuminate form of the lesions. It would thus appear that for some time to come many various opinions will continue to be held as to the constitution of the lichen family.

Sterilization of Doctors.

It has been proposed by Gutmann that stations be erected in convenient localities in cities and large towns where physicians may go to be thoroughly disinfected immediately after they have visited a case of infectious disease, and before paying any further visits. The operation will take about fifteen minutes, and then the doctor may go about his business, proud in the consciousness of being clean and no longer a menace to the health of his fellows.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Intubation in Germany.

The Children's Hospital at Leipsic is the only one in Germany where intubation is regularly employed. Baginski formerly used it, but now prefers tracheotomy in most cases. The results at Leipsic are very good, over 200 intubations having been made in the last two years with 32 per cent. recoveries. Carstens has modified the O'Dwyer tube a little and inserts it while the child is lying on its back in bed instead of sitting in the upright posture. The presence of a tube in the larynx usually renders the swallowing of liquids difficult, and thus the taking of the necessary amount of food is apt to be interfered with. This difficulty is met in America by the giving of solid foods, or by placing a patient upon the back with the head lower than the rest of the body while swallowing. In Leipsic, however, all intubated patients are fed through the catheter, so that there is no diminution in the amount of food given. The tube is worn from two to five days. If left longer than this, it is apt to cause ulceration. If at the end of five days relief of stenosis is called for, tracheotomy is performed. This has been necessary but twelve times in two years.—*Physician and Surgeon.*

The Heart in Typhoid Fever.

Dr. Huchard considers that the cardiac symptoms in typhoid fever may be due not only to myocarditis, but also to functional disturbances of the innovation of the heart. These symptoms disappear far too rapidly to be ascribed to myocarditis. Clinical experience has also shown that bradycardia, tachycardia and all other deviations from the normal rhythm of the heart depend upon a functional disturbance of the pneumogastric nerves. The action of the microbial toxins may also be purely functional.—*Med. Week.*

Pathogenesis and Treatment of Influenza.

It is well known how popular the quinine treatment of influenza was when that *maladie a la mode* visited our shores. So far as my knowledge goes this mode of treatment was strictly empirical, no laboratory experiments having been made on its action. The medical world will therefore be glad to know that the experiments of M. Mosse have confirmed the good opinion entertained of the value of this drug in combatting la grippe. Rabbits were inoculated with the blood of influenza patients, and then quinine was injected subcutaneously. 4 out of 6 of these animals remained unaffected, while test rabbits unprotected by the drug became very ill. Again, rabbits inoculated with pure cultures of Pfeiffer's microbe (furnished by M. Roux) were quite capable of supporting this inoculation, provided subcutaneous injections of quinine had been previously practiced. Of 3 unprotected rabbits, 2 were killed by the inoculation. Efforts to cultivate (on gelatine) the pathogenic bacillus from the blood of an influenza patient were always unsuccessful. In one instance the pneumococcus and in another the staphylococcus were obtained. The blood of animals experimentally infected with influenza yielded the specific microorganism only on one occasion. This culture was endowed with but feeble vitality and proved to be non virulent. M. Mosse arrives at the conclusion that the influenza bacillus is found only exceptionally in the blood, and that when so found its virulence is enfeebled. It is, moreover, unable to live in an organism in which the drug in question circulates, viz., quinine. It would thus appear that the exhibition of quinine as a prophylactic is justified; that it should be prescribed in large doses as an abortive agent; and that, finally, grave secondary infections, especially if due to the pneumococcus, call for hypodermic injections of quinine.—*Lancet; Med. Rec.*

Some Symptoms Which Simulate Disease of the Pelvic Organs in Women—Their Causes and Treatment.

Dr. A. Rabagliati: The condition often described as ovarian neuralgia is, as a rule, neither ovarian nor neuralgic, though both may coexist; but is essentially a rheumatic perimysitis, due to improper nutrition and the absence of proper exercises in the open air, and can be cured without operation. In the kind of cases under consideration it is assumed that there is no gross disease of the pelvic organs beyond, perhaps, a slight displacement of the uterus or its appendages. In such cases oophorectomy is, in my opinion, an unjustifiable operation, and a much better procedure is my own operation of cutting down on the umbilicus, rawing the surfaces and bringing them together, though, as a rule, not even this is necessary. In the examination of these women we find tenderness of the oblique muscles of the abdomen, of the recti muscles, of the umbilicus itself, of the quadratus lumborum muscles, of the sacroiliac synchondrosis, and also of the sacral origin of the glutei maximi. This tenderness, I think, explains the complaint usually made by these women of being constantly tired. The kind of pain is an aching one, such as is associated with trouble in muscles, rather than numbness, tingling or smarting, such as characterize nervous involvement. Other muscles may also be affected, such as the solæi and gastrocnemei, the quadriceps ex-

tensors, etc. Minor degrees of disease of the uterine appendages may of course coincide with this condition, but the latter is really the main cause of the patient's suffering. There are many reasons for believing that this muscle trouble is rheumatic in character, and these have led me to designate the affection as perimysitis rheumatica. The principal cause is, I believe, the improper feeding of these women, especially the bread and tea which they take in such large quantities, and the best treatment is to place them on a liberal diet, combating the rheumatism by appropriate remedies and washing out the waste with hot water taken an hour after food three times a day. I wish to lay great stress also on the value of bathing followed by methodical exercises calculated to put into action the disused muscles.—*Arch. Gynec.*

Dangers of Naphthol.

Baatz, in the British *Medical Journal*, has seen acute nephritis follow friction with an ointment containing 2 per cent. of naphthol beta in two brothers aged six and eight, respectively. The remedy was applied for scabies. This was cured, but three weeks afterwards albuminuria with edema of the lower limbs came on. One of the boys died, and the diagnosis of nephritis was verified by post mortem examination. In neither case had minuria previously existed, nor was there any history of an affection which could have been the starting point of nephritis. The author therefore warns against the use of naphthol beta as a remedy for scabies in spite of the powerful curative effects.

Spontaneous Cure in Amebic Dysentery.

The rarity of spontaneous cure in such severe forms of dysentery has led Drs. George J. Preston and John Ruhrah to report a case in the New York *Medical Journal*. A colored man aged twenty-two, with a fairly good history, was admitted on account of dysentery. Examination of the stools showed the typical amebæ. Patient was given large doses of the tincture of iron. The dysentery was not treated, but in the next few days the amebæ disappeared and the man recovered.

Puerperal Neuritis.

With an expansion of our knowledge of the complications of the parturient and puerperal states, and with a glowing familiarity with the lesions of the peripheral nerves, we have come to learn that the intoxications dependent upon infection through wounds and lacerations resulting in the course of childbirth may give rise to a multiple neuritis comparable to that of rheumatic, plumbic, alcoholic, or other like origin. A typical case of this kind was recently reported by Lountz (*Nouvelles Archives d'Obstetrique et de Gynecologie,*) at a meeting of the Societe de Neurologie, of Moscow. The patient was a primipara, twenty-four years old, who passed through pregnancy and labor without complication, the child dying, however, on the fifteenth day. Three weeks after the labor the woman presented swelling of the face, œdema of the extremities, difficulty of deglution, diplopia, pains in the extremities, and then numbness and weakness of the upper and lower members. Common sensibility was little affected, but the muscular sense was impaired. The knee-jerks and the elbow-jerks were abolished, and electric irritability was diminished. These symptoms were progressive for two weeks. To them were added arrhythmia of the heart, acceleration of the pulse, and attacks of suffocation. The lower extremities became entirely paralyzed. By and by, however, the symptoms gradually ameliorated, except the paraplegia which persisted for a long time. It is assumed that this depended upon a polyneuritis due to infection through a laceration of the perinæum incurred during labor.—*Medical News.*

Physiological Rest in the Treatment of Prolapse of the Rectum

Bryant, (*Mathew's Medical Quarterly*), reports the case of a man operated on seven times for the relief of extensive prolapse of the anus, with its attendant distressing symptoms. Until the last operation, surgical intervention had been of little benefit. Bryant, to whom he finally came, made an artificial anus in the left groin, putting the patient to bed for two weeks, meaning to proceed to further treatment. But this operation was followed by so much relief and by such a marked diminution in the pressure that he was content to adopt no further procedure. He submits the following proposition as a conclusion to his paper:

That the proper performance of the physiological functions of the rectum contributes greatly to the advancement of rectal disease and to the afflicted.

That the complete vicarious discharge of the fæces through an artificial anus located in the sigmoid flexure reduces the physiological demands on each structure of the rectum to a minimum.

That the lessening of the physiological requirements is commonly in direct proportion to the diminution of the fæcal flow through the rectum.

That the cessation or lessening of the fæcal discharge per rectum exercises a palliative and curative influence on diseases of the rectum.

That in certain cases of obstinate rectal prolapse the formation of a vicarious channel for fæcal discharge is justifiable, both as a palliative and curative measure.

That the preliminary establishment of such a channel for the purposes of cleanliness and the prevention of infection is justifiable in many grave operations for prolapse of the rectum.

That the dangers attendant on the formation of an inguinal anus are much less than those invited by the contact of fæcal discharges with large operative surfaces of the rectum.

That the case just presented has been, without special risk, greatly benefited, and

may be finally cured, through the agency of an artificial anus.

That when cure takes place, great care must be excercised thereafter, otherwise the prolapse will return.

Bichromate of Potassium as a Remedy in Gastric Affections.

We offer the following synopsis of a paper on the above subject, which was read at the International Medical Congress by Professor T. R. Frazier: Notwithstanding the assertion made in 1883, by so high authority as Vulpian, of the value of bichromate of potassium in the treatment of several forms of gastric disturbance, this substance has not yet gained a position among the many substances that are used in the treatment of these affections. Having, in 1884, treated with gratifying success a case of persistent gastric disorder by the administration of small doses of bichromate of potassium, I have since that time administered it in a large number of cases, and the results have been so favorable that I feel myself justified in now stating my opinion of the therapeutic value of the substance. The cases have been recorded in two groups, the first group comprehending 18 cases of various forms of dyspepsia unassociated with evidence of gastric ulcer, and the second group, 10 cases in which distinctive symptoms of ulcer had been present at some previous time. The doses administered in the above cases have varied ½ grain to 1-6 grain, twice daily, and in most instances the smaller dose was found to be sufficient. The dose should be given during fasting and on as empty a stomach as possible. The administration was effected in the form of pills or an aqueous solution which may be flavored with tolu or orange. An examination of these cases shows that bichromate of potassium is capable of relieving, and often in a short time of removing, the entire group of symptoms—if we except constipation and anemia—encountered in dyspepsia, and especially pain, nausea, vomiting and gastric tenderness. In a few cases of acute gastrice ulceration, with hematemesis, in which I have given bichromate of potassium, the results were not favorable, as it did not succeed in checking the bleeding. Bichromate of potassium possesses a strong anti-putrefactive power, which is exhibited in albuminous, saccharine and phosphatic urines, even with a 0.01 solution. This action probably constitutes one of the causes of its anti-dyspeptic therapeutical value, but there are undoubtedly other causes, such as direct or indirect analgesic action, and probably a selective action on the nutrition of function certain histological structures, which I am now engaged in endeavoring to determine.—*Lancet.*

Causes of Sexual Debility.

Dr. F. R. Sturgis gives the following summary of his views at the termination of a very instructive paper: 1. That the cases of sexual debility which are marked by imperfect erections and by premature emissions are usually, if not entirely, due to hyperæsthesia of some portion of the urethra. 2. That masturbation has very little, if anything, to do with it beyond the fact that if indulged in to excess it may induce a tendency toward this hyperæsthetic condition, but this is no more marked in masturbators than it is in those persons who indulge to excess in the venereal act. 3. That organic stricture has little, if anything, to do with it; but that associated with this hyperæsthetic condition there is an irritable condition of the canal which produces spasmodic contractions of the urethra upon attempts to pass instruments, oftentimes during the first act of micturition and at the time of connection. 4. That varicocele plays no unimportant part in these cases. 5. That neuralgia of the testis, if a cause of this disease, induces it merely as a secondary consequence to the pain, which is one of the distinguishing features of this disease. 6. That tuberculosis, syphilis and gonorrhœa may also play their part, and should all be reckoned with in summing up the causes which may induce this peculiar and depressing condition of affairs.—*Gaillard's Med. Jour.*

Chronic Recurrent Tetanus Treated with Thyroid Extract.

At a recent meeting of Berlin Medical Society, Gottstein reported a case from the clinic of Mikulicz, in which a thirty-four-year-old man who had suffered from attacks of tetanus since his twelfth year, was found to have no signs of a thyroid gland; and as tetanus is one of the symptoms observed in animals deprived of their thyroids, he was treated by having a goitre from another patient implanted in the abdomen. The result was very gratifying as the frequency of the attacks was very much reduced. This improvement was only temporary, whereupon a second similar implantation was made, with the same result, decided improvement with subsequent relapse into the original condition. The man was then put upon thyroid extract by the mouth, whereupon the attacks diminished gradually from twenty a day to three or four a day, at which number they have remained. The general condition has been much improved.—*Deutsche Med. Wochenschrift.*

Turpentine in Incontinence of Urine.

The unpleasant smell emitted by persons suffering from incontinence of urine can be conveniently covered, according to Dr. Emminghaus by means of ten-drop doses of turpentine administered in milk or water three times a day. This converts the smell of stale urine into an odor resembling that of violets, as is well known to persons who have taken turpentine. The remedy is perfectly harmless in most cases, and has been given by Professor Emminghaus for many weeks at a time without any inconvenience. It is, however, contraindicated in ulcer of the stomach, gastric catarrh, and nephritis, and also in

some persons in whom turpentine tends to upset the digestive functions.— *London Lancet.*

Lactophenin.

If the results of Jaxuet and of Strauss (*Abst. in Fortschritte d. Medicine,*) should be confirmed, lactophenin will certainly fill a long-felt want for an effective antipyretic which does not at times cause alarming symptoms. The compound is a near relative of phenacetin, differing from it only on having the acetic acid which is combined with the ammonia of the latter, replaced by lactic acid. It is said to be a prompt and effective antipyretic with the addition of a decided hypnotic effect. Its great advantage, however, is in the freedom from disturbing secondary effects. Even where the fall of temperature produced by it has been very great (9°F.), the patient feels perfectly comfortable with a quiet, full pulse and a clear intellect. As an anti-neuralgic and sedative it ranks with antipyrine, phenacetin, etc.

To Relieve the Thirst of Diabetics.

Pilocarpin may be administered in solution or in pill form. The pills are best prepared by the addition of glycerin and gum arabic. Each contains gr. $\frac{1}{60}$ of pilocarpin nitrate. For the solution the following form is given:

Pilocarpin nitrat	gr. ½
Spirit vini dilut	mxx
Aquæ	ʒj

M. Sig.: The tongue is to be moistened with 5 or 6 drops of this solution four or five times daily.

—*Nouv. Remedes.*

Vomiting in Pregnancy.

Lutaud (*Rev. Obstet. et Gyn.*) states that vomiting of pregnancy is best treated by cocaine. The action of this drug is often strengthened by combining it with antipyrin. Thus the following prescription:

Chlorhyd., cocaine	grs. jss
Antipyrin	grs. xvi
Aq. dest	ʒ iv

Sig.: Teaspoonful every half-hour until the vomiting ceases.

If the stomach will not tolerate the quantity of liquid, ten drops of a one and a-half or two per cent. solution of cocaine are administered, repeated at one or two-hour intervals.

At times the application of cocaine to the os is extremely valuable. The following prescription may be used:

Hydrochlor. cocaine	grs. xvi
Ext. bellad	grs. iv
Vaseline	ʒ ss

Cotin's method of dilating the os with the finger sometimes causes immediate cessation of vomiting. Occasional success will follow Routh's procedure, which consists in exposing the uterine neck by means of a speculum and painting with tincture of iodide. In cases of moderate severity the following mixture will be found serviceable:

Tinct. iodine Chloroform	āā ʒ ij

Sig.: Five drops night and morning at meal times, taken in Seltzer-water.

—*Kan. Med. Record.*

Hydrochlorate of Chalk for Pruritus Ani.

Take (*Sem. Med.*), a piece of cotton gauze two or three centimeters long, which has been moistened with a solution of hydrochlorate of chalk, two to the hundred. Push up the anus and leave in place until sharp smarting commences. Then remove it and wipe surface of anus dry. Itching immediately ceases. If it should return employ the same proceeding. It appears that this solution simultaneously clears up all the eczematous patches about the anus and scrotum, a condition so generally concomitant with an anal itch.

Chrysarobin in Chronic Ringworm of the Scalp.

Duhring (*American Journal of the Medical Sciences*), as the result of an extended experience with a large number of chronic cases of ringworm of the scalp in a boys' school, arrives at the conclusion that chrysarobin was the most active and potent parasiticide employed. It was used in various strengths, but generally in the form of an ointment of one dram to the ounce. While, as a rule, it was well tolerated, the writer advises care in its employment, especially in avoiding the face.—*Int. Med. Magazine.*

A New Method of Making Palatable and Digestible Milk.

Dr. Robert T. Edes, of Boston, gives a valuable way of preparing milk where other methods have not proved useful:

A pint of milk is gently warmed. Into it is dropped, very slowly and with constant stirring, about twenty minims of the dilute hydrochloric acid of the United States Pharmacopœia. The milk should be stirred until it cools. In this way a very fine flocculent coagulum is produced, floating in the whey, which is easily accessible to the digestive secretions, while the whole fluid has lost somewhat of the flat and cloying taste which makes it unacceptable to so many. It will be noticed that milk prepared in this way differs from the various "wheys" in the highly important particular that the casein is retained and used, instead of being separated out as a distinct product, while it avoids the bitterness of pancreatinized milk.—*Boston Med. and Surg. Jour.*

Potassium Nitrate in the Treatment of Phlegmasia Alba Dolens.

Hovnanian, (*Medical News*) describes his use of nitrate of potassium in this affection:

It has fallen to his lot to treat three well-marked cases of phlegmasia alba dolens with potassium nitrate with such gratifying results as to seem to justify publication.

Mrs. H., twenty-three years old, was delivered of her first child by her family physician with instruments, and sustained extensive lacerations of the cervix uteri and perineum, which at the time were not repaired, but were left for a secondary operation. Twelve days after delivery she complained of pain and heaviness in the left leg, and within three days there developed well-marked phlegmasia. On the fourth day of this complication the writer saw the patient in great agony, with a temperature of 105.2° F., a pulse of 130, and respirations 25. The limb was so turgid and swollen that there seemed to be great danger of gangrene or rupture. The woman was at once given morphine sulphate (⅛ grain) hypodermically, and her limb was wrapped with cotton and placed on a feather pillow at a very obtuse angle. Hovnanian then prescribed a solution of potassium nitrate in water, respresenting 5-grain doses, to be given every hour until his return. Seven hours later he found his patient in better condition, with a temperature of 103° F., a pulse of 112, and respirations 22, and with less pain and discomfort. The swelling seemed to be less tense and the veins less engorged. The nitrate was continued as before until morning, when he found her in yet better condition. She had slept well during the night, although she had been wakened regularly for her medicine. Her temperature was 100° F., her pulse 95, her respirations 20. The swelling was reduced to less than half, and the returning circulation was fairly well established. There was no pain whatever and but slight tenderness on pressure. The medicine continued every two hours during the day, until the author saw her late in the evening, with a temperature of 99° F., a pulse of 90, and respirations 18. The swelling had almost entirely gone and everything was in good condition. The nitrate was continued for two days in smaller doses and at longer intervals, and then discontinued.

Two other equally typical cases are also recorded in this paper.

Nephritis Following Friction with Naphthol.

In the *Revue internationale de medicine et de chirurgie pratiques* there is an abstract of an article on this subject by M. Baatz which appeared in the the *Centralblatt fur innere Medicin*. The author relates two cases of nephritis following naphthol frictions for the itch. In the first case, that of a boy nine years old, the nephritis, which was not very pronounced, manifested itself in edema of the legs, the feet, and the scrotum, accompanied with slight albuminuria. Recovery followed very quickly under the influence of a proper diet and baths. In the second case, that of a boy six years old, anasarca and symptoms of broncho-pneumonia were observed when he entered the hospital. The urine, which was brownish in color, contained albumen, hyaline casts, and red blood corpuscles. Notwithstanding the treatment, which was carefully applied as soon as the symptoms appeared, the situation became aggravated and the child died four days after his entrance into the hospital. At the autopsy extensive broncho-pneumonia of the left base and parenchymatous nephritis were found. The author thinks that in both cases nephritis had been provoked by the naphthol frictions. He recalls the fact that similar cases have been observed before by other authors. Kaposi has published an account of a boy who, after friction with naphthol for prurigo, was taken with ischuria, with bloody urine, vomiting, loss of consciousness, and eclampsia which persisted for several days. The child recovered. Lewier has related the case of a man who, after fifteen days of naphthol frictions, was taken with acute nephritis with albuminuria. Finally Frohmuller has observed three cases of naphthol poisoning where the principal symptoms were acute nephritis and attacks of mania.

The Dietetic Treatment of Phthisis.

The following suggestions by Dr. Henry P. Loomis (*The Practitioner*) are worthy of careful consideration:

1. Never take cough mixtures if they can possibly be avoided.
2. Food should be taken at least six times in the twenty-four hour; light repasts between the meals and on retiring.
3. Never eat when suffering from bodily or mental fatigue or nervous excitement.
4. Take a nap or at least lie down for twenty minutes before the midday and evening meal.
5. Take only a small amount of fluid with the meals
6. The starches and sugars should be avoided; also indigestible articles of diet.
7. As far as possible each meal should consist of articles requiring about the same time to digest.
8. Only eat so much as can be easily digested in the time allowed.
9. As long as possible systematic exercise should be taken to favor assimilation and exertion; when this is impossible, massage or passive exercise should be undergone.
10. The food must be nicely prepared and daintily served—made inviting in every way.

Chronic Constipation and Its Treatment.

The causes of constipation (James D. Staple in *Med. Times and Hosp. Gaz.*) are:

1. Lack of tone in the muscular coat of the intestines causing a decrease in peristalsis, usually due to imperfect regional innervation.
2. Deficient secretion or excessive absorption.

People leading sedentary lives are predisposed to constipation.

The symptoms (excepting in those cases due to organic disease) are:

Loss of appetite, imperfect digestion, nausea, headache, irritability, mental depression, bad complexion, acne, sleeplessness. Hysteria in the female and hypochondria in

the male have been often caused by constipation, and it is even stated that a condition of disease bordering upon insanity may be brought about by a long-continued defective formation of fæces and imperfect action of the bowels.

Moreover, the material which should have been removed will accumulate in the blood, and in consequence such diseases as gout rheumatism, etc., may be developed.

The treatment may be divided into (1) non-medicinal and (2) medicinal. Under the non medicinal we may include: (*a*) correction of diet; (*b*) fluids before breakfast; (*c*) exercise; (*d*) cold bath or rubbing the body with a rough towel; (*e*) kneading the abdomen; (*f*) going to stool at a regular set time.

In the medicinal treatment of chronic constipation avoid giving purgatives, the reason being that patients acquire the habit of depending on them. Small glycerin suppositories are highly recommended, being rapid and certain in action and their use unattended with griping or irritation of the gastro-intestinal tract. In cases where aperients must be given cascara sagrada is recommended, but even in these cases it is well to begin with some natural mineral water.

Eucalyptol in Eruptive Diseases.

The following, says an exchange, will increase the activity of the skin and besides prove an excellent antiseptic:

Eucalyptol	ʒ ss
Carbolic acid	grs. v
Lanoline	ʒ ij

M. Apply over eruptive surface.

The Significance and Etiology of the Premature Discharge of Meconium.

E. Rossa (*Archiv. f. Gynak.*) states that it is commonly believed that the escape of meconium before term is a sure sign that the fœtus is in danger of asphyxia, and is therefore an indication for the hastening of delivery. The author's personal investigations have led him to doubt the correctness of this teaching. In a large number of cases the escape of meconium has no significance of the kind generally attached to it. The cause of the phenomenon is simply increased intestinal peristalsis, which may indeed be due to asphyxia, but may also be due to other less well defined causes. Among these the principal are diseases of the mother, and particularly gastro-intestinal disorders.

Chronic Rhinitis and Pharyngitis.

Dr. H. M. Dunlop, sanitarian at Battle Creek, Mich., claims (says *Prescription*) to have obtained excellent results from the application of the following:

Ol. cinnamon	gtts. xx
Eucalyptol	ʒ iij
Ol. gaultheriæ	gtts xxx
Menthol crystal	grs xx
Liq. albolene	ʒ iij

M. Use with atomizer.

Virchow's View of the New Treatment of Diphtheria.

Virchow's opinion of the efficacy of the new treatment by blood serum of diphtheria may be thus summarized: The serum exercises a strong protective effect for weeks, perhaps even for three to four months; but it remains to be seen whether this effect is permanent, and whether—and this is the cardinal question—it is really possible to cure diphtheria by this remedy. Much however, is gained if we succeed in protecting even one child in a family in which three or four are ill of this malady. And that we may accomplish this appears extremely probably. —*German Correspondent, Med. Press.*

Chloral in the Treatment of Boils.

(Le Chloral contre les Furoncles. *Bull. Gen. de Therapeutique.*) By M. Spehn.

The author recommends very highly as far superior to all other treatment the use of chloral externally in this troublesome class of affections. He directs that the boil be kept covered with a tampon of cotton-wool soaked in the following solution:

Chloral. hydrat.	ʒ iiss
Aquæ. Glycerin.	ää f ʒ v.—M.

—*Int. Med. Magazine.*

SURGERY.

Circumcision.

In most cases the foreskin adjusts itself to conditions of perfect cleanliness at the time of puberty, if not before. Physicians are not so senseless as to unnecessary mutilate themselves and their families. Circumcision is a relic of barbarous and semicivilized times, before soap and water and sanitation had been preached. It no doubt served a useful purpose among the nomadic tribes of tropical countries. But in these days physicians should cease to preach or impose upon their patients an unnecessary and irrational mutilation.

The rite which in these modern times might be substituted for the early religious ceremony of circumcision would, according to some, be resection of the spermatic cord of the vicious and defective classes, so that they should cease to propagate their kind. Spermatorectomy will probably triumph over and replace circumcision if anything does.—*Editorial in Med. Rec., N. Y.*

Chordee.

In a paper on "Local Anæsthesia," Dr. Wm. P. Carr, of Washington, D. C., writes, *Med. Buelletin:* "In this connection I may mention a fact well worth knowing, and I think not generally known, the chordee may be entirely and promptly relieved by putting on a condom containing two or three drachms of a two per cent. solution of carbolic acid, and that any pain in the penile portion of the urethra or pendulous penis may be controlled in this way."

Strangulation of the Tonsils.

Dr. Marcel, who is chief of the clinic for diseases of the nose and throat at Bucharest, describes the removal of the tonsils with the cold snare, which he has performed in fifty cases. He always makes use of a snare with three rings and without a screw, employing the same kind of wire as that used for removal of nasal polypi. In the after treatment he recommends gargles of carbolized water, with addition of oil of peppermint. On the following day in place of the tonsil is found a whitish exudation, and the patient experiences slight difficulty in swallowing which may last from a few hours to two or three days. The wound is completely healed in the course of eight days.

On the ground of the fifty cases treated the author formulates the following conclusions:

1. Strangulation of the tonsils by means of the cold snare is an easy procedure and attended by but little pain, even without the use of cocaine.

2. Although not the only method for removal of the tonsils, it is especially indicated for nervous children, and in cases of greatly enlarged tonsils.

3. This method is contra-indicated where the tonsils are incarcerated or extended too far beyond the faucial pillars.

4. The hemorrhage is often much slighter if the operation is performed slowly; at any rate, it is not more profuse than under the use of the tonsillotome or knife. It usually ceases within a few minutes; and should this fail to occur, it can be arrested by application of a small cotton tampon medicated with equal parts of iodoform and tannic acid.

5. The cold snare has the following advantages over the tonsillotome: (*a*) It is less likely to provoke fright in children. (*b*) It is a less costly instrument. (*c*) It can be more readily cleansed, and hence is more aseptic, especially if a new wire is used for every operation. (*d*) The removal of the tonsils is more thoroughly effected, although much less rapidly than with the tonsillotome.

6. The cold snare is to be preferred to the knife, because it requires the use of only one hand and does not produce injury of surrounding parts.—*Wien. Medic. Press.*

Fractures of the External Condyle.

Dr. F. E. Bunts summarizes his views as follows: Fractures of the external condyle are confined almost exclusively to children, and are usually the result of direct injury. Displacement of the fragment may take place in any direction except inward, and is sometimes accompanied by a dislocation of the radius and ulna. While good motions may generally be anticipated, anchylosis either partial or complete is of frequent occurrence. An unusual prominence of the upper end of the fragment, widening of the joint, increase or decrease of the carrying angle of the forearm, may result under any treatment. No dogmatic line of treatment should be insisted upon. Early passive motion should be resorted to. The prudent surgeon will at once inform his patient or patient's parents of the nature and probable consequences of the case, and refuse to promise them under any consideration that a perfect result will occur.—*Med. Age.*

Congenital Ptosis.

Dr. Mary Putnam Jacobi presented a baby with congenital ptosis. At birth, the eye had been completely closed, but subsequently the ptosis had become partial. It differed from cases of this kind previously reported in being unilateral. The condition is quite rare, and in most instances the recti muscles are involved, which is not true of the present case. In a case described by Schenckel all the ocular muscles were imperfectly developed, but accommodation was perfect, as was also the response of the pupils to light. In another report, mention is made of two members of the same family being affected in this way. Gower speaks of combined paralysis of the facial and abducens as being rather more common than paralysis of the oculo-motor nerve. The question of the syphilitic origin of this condition naturally suggests itself, but there seems to be no reason for suspecting such a constitutional taint in the case just presented. It is possible that it may be one of the parasyphilitic lesions. The speaker said that so far as she knew, the only attempt to remedy this condition had been made by Evans, of Louisville, who had operated upon a case of bilateral ptosis according to a method devised by Pannus. In brief, this consisted in taking a flap from the lower part of the eyelid, and uniting it to the occipito-frontalis muscle, the object of the operation being to make this muscle take the place of the missing levator. The result in the case reported has been fairly satisfactory.—*Archives of Pediatrics.*

Local Therapeutics of Phenacetine.

Although phenacetine has been chiefly utilized for internal administration as an antipyretic, antineuralgic and sedative, evidences are at hand showing its great value as a topical remedy in various diseases. In an article read some time ago before the Tennessee State Medical Society, Dr. M. H. Lee reported a number of cases of ulcers in which remarkable results were produced by the application of finely powdered phenacetine. The ulcers were of traumatic and specific character, and had resisted external and internal treatment. Under the application of phenacetine, however, immediate improvement was effected, pains, if present, being at once relieved and granulations appearing rapidly. Dr. D. Coit Taylor, of Providence, R. I., (*Med. World*) has obtained excellent results from the local employment of phenacetine in the treatment of rheumatic pains of joints, pains from sprains, contusions or bruises, and recommends the following formulæ:

Phenacetine..... ..... gr. 15–20
Spts. vini rectific.—Aquæ bul.. āā 1 ounce

Sig.: To be applied on cloths as hot as can be borne.

Phenacetine..... gr. 15-20
Lanoline..... 1 dram

M. Apply by manipulation.

According to the *Journal de Medecine de Paris* (*Therapeutic Gazette*) useful results are obtained in cases of acute rheumatism by applying phenacetine externally to the painful parts. The following prescription may be used:

Phenacetine..... gr. 75
Lanoline..... 6 drams
Olive oil..... a sufficient quantity

To be rubbed about the inflamed parts.

Phenacetine..... gr. 75
Alcohol..... 2 pints

In this solution dip compresses and apply to the painful parts.

Internal Hemorrhoids.

Dundore, after an exhaustive paper on the subject of internal hemorrhoides, concludes as follows:

1. The ligature is the safest method of operating for internal hemorrhoids, as there is less likelihood of its being followed by hemorrhage, stricture, or ulcers.

2. The clamp and cautery cause less pain, shorter convalescene, and are less likely to be followed by retention of urine than when the ligature is used; but hemorrhage and stricture of the rectum may very often follow their improper application.

3. The practice of Whitehead's method should be limited to those cases in which the entire circumference of the anus is involved. In ordinary cases of one or more hemorrhoids it should never be used, as it is liable to be followed by severe after-effects, and at best could produce no more radical result than the clamp and cautery or ligature.

4. Simple dilatation of the sphincter, injection of carbolic acid, and Manley's method are simple palliatives, and their use is very limited.

5. There is no single operation which is available in all cases. Experience alone should suggest the most efficient method of treating each individual case. — *Mathews' Medical Quarterly.*

Fractures of the Humerus at the Elbow Joint.

Dr. C. W. Dulles calls attention to the point in the management of the fractures of the humerus at the elbow joint that if the forearm be semi-pronated and fully flexed upon the humerus, the head of the radius and the coronoid and olecranon processes of the ulna will hold the inner and outer portions of the lower end of the humerus in a correct anatomical relation to each other and to the bones of the forearm. To meet these indications he applies from the fingers to the shoulder, smoothly and with moderate tension, a soft flannel bandage, avoiding undue pressure upon the anterior angle at the elbow by having the forearm flexed and semi-pronated while the bandage is applied. After this the bend at the elbow is filled with some cotton, a splint is laid against the arm with very moderate cotton padding—not bound on with a bandage, but just laid loosely on—and the whole is enclosed with a good roller bandage. Any splint may be used which will maintain the forearm in full flexion upon the upper arm. For this purpose a splint with a very acute angle, to fit either side of the arm, or an anterior angular splint will answer—*Boston Med. and Surg. Jour.*

Treatment of Ulcers of the Leg.

Frank (*Jour. of Amer. Med. Asso.*) treats these cases as follows: The granulations are thoroughly cleansed at first. Then they are treated with silver nitrate if the granulations are hypertrophic, or with iodoform if the surface is putrid, torpid and lacking in vitality. The leg is then washed and shaved, and a moderately thick layer of warm gelatine is applied to the ulcer with a brush. The gelatine is thus prepared:

Oxide of zinc..... 30 parts
White gelatine..... 40 "
Glycerine..... 50 "
Water..... 90 "

A small patch of gauze is added as a covering and a gauze bandage from the toe upward. If you want firm dressing, cover the bandage with another layer of gelatine, and continue the bandage from above downward; let the gelatine cool and dry. If the discharge is abundant repeat the dressing every fourth day. If it is less, keep it on for eight days.

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ORIGINAL ARTICLES.

A FATAL CASE OF PELIOSIS RHEUMATICA COMPLICATED BY MALIGNANT ENDOCARDITIS.

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Hemorrhages under the skin occur under such varied circumstances that it is somewhat difficult to separate them into individual groups as one variety often merges so close into another, but clinically three distinct forms have come to be recognized as having sufficient differences to warrant their being called by individual names. To these three varieties of subcutaneous hemorrhages the generic name of purpura has been given, and they are distinguished from one another according to the severity of the symptoms, their supposed etiology and the gross appearance of the spots, by certain adjectives.

The first and mildest form is purpura simplex, which consists usually of small scattered petechial spots appearing upon any part of the body, but most frequently upon the arms, neck and trunk; the cause of which is very undetermined, the affection giving no subjective symptoms, and most often needs only to be differentiated from flea bites by there being no central point of injury in the former and the redness does not disappear on pressure. Recovery from this form is the rule, though our prognosis must be guarded, owing to the possibility of complications.

The second variety is that known as purpura rheumatica, or peliosis rheumatica, in which the cutaneous hemorrhages constitute the chief feature of the disease, although there are accompanying symptoms, such as vomiting, abdominal pain and severe pains in the joints, which are so like the manifestations of arthritic rheumatism as to frequently make it most difficult to distinguish it from the latter, especially when the joint symptoms precede by several days the appearance of purpuric spots. Its course is often obscure, as it not infrequently arises in the midst of apparent health, though in some cases it follows hepatic derangement, while in other instances sudden nervous shock or prolonged mental worry has been noted as a causal factor in its production. In the case about to be described both congestion of the liver and prolonged mental anxiety preceded immediately the onset of the attack. The tendency, however, of late years has been to consider an infectious microbe as the cause of peliosis rheumatica—just as many observers, such as Whittaker and others, believe that acute rheumatic arthritis is an infectious disease. Thus Letzerich found a bacillus which caused hemorrhages when injected

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into healthy rabbits, and Petrone produced the same result by injecting blood from a purpuric patient, and still other investigators corroborated these experiments. Hanot and Luzet, as quoted by Hardaway, found in a foetus, the mother being dead of purpura, streptococci identical with those found in the mother. Though too recent to be relied upon, these observations suggest that some cases of purpura may be acute infectious diseases, and this idea is borne out by the clinical history in many cases, such as the writer's own, where there followed as a complication a malignant endocarditis, an affection admittedly of microbic origin.

The third and most severe form of purpura is purpura hemorrhagica (Morbus Werlhöffi) which presents in addition to cutaneous hemorrhages, bleeding from the various mucous surfaces, and at times hemorrhage into the internal viscera, the most rapid death being produced by a bleeding into the brain substance.

The prognosis in the last two varieties of purpura is always grave.

Without discussing the subject further from a didactic standpoint, I record the following case.

The patient was a large, well-built man of thirty-nine, superintendent of public schools in one of our New Jersey cities. For several months he had been under great mental anxiety about domestic affairs. He showed an evident lithæmic diathesis and suffered occasionally from sick headache, probably averaging one attack a month, but never accompanied by vomiting. Aside from this his general health had been always good, except an attack of enteric fever some twelve months previous, in which simple albuminuria was present. He suffered a relapse lasting two weeks, with a temperature reaching as high as 105½°.

Two months before his last illness he had a siege of diarrhœa, lasting about four weeks, with black stools.

I saw him for the first time on September 4th. Upon September 2d he felt chilly all day and at midnight severe bilious vomiting ensued, lasting nearly two hours almost continuously, the vomited matter being very bitter. The temperature, taken soon after, was 104½° and later fell to 102°.

The following morning a small purpuric spot made its appearance upon the right side of the second phalanx of the right middle finger. The temperature was then 101°. There was little or no itching, but a slight burning pain, and the spot increased in size rather rapidly, until by night it measured one-third of an inch in diameter, and by this time showed a white central point. The lymphatic from this area leading up the side of the finger was inflamed, so that its course could be distinctly traced. During this same day he complained of marked pain in the right ankle and right wrist joints, both of which were slightly swollen, and the pain was greatly increased by either active or passive motion.

At the next visit, which was on the morning of the third day of the disease, numerous other spots had made their appearance—sixteen being counted upon the left hand and seven upon the right. All were small, non-elevated, purplish in color and varied in size from a pin's head to one-quarter inch in diameter. The larger spot before described, with white centre, was laid open and a scraping placed on a slide under the microscope showed the white central portion to be pus cells, and the surrounding purplish-black pigment, scraped and placed on a porcelain tablet, responded to the test for bile by showing a well-marked iridescent play of colors with a drop of fuming nitric acid. This seems to be a new feature about the manifestations of rheumatic purpura, as I am unable to find any record of bile being recognized in such spots, even where, as in this case, the attack followed immediately an acute derangement of the liver. Of course one might ask did not this apparent bile reaction really come from the presence of hæmatin, derived from decomposed hæmaglobin. The detection of this bile, however, lead to a careful examination of the liver, urine and feces. The liver was enlarged, tender and at times during this first week so painful as to require turpentine stupes. The urine was laden with bile, responding distinctly to three different tests, and the stools were clay-colored. Here then the blood must have been saturated with bile, and why should not a purpuric spot, making its appearance at such a time, show bile also?

Up to this time the patient, from a combination of ambition and general restlessness, had refused to remain in bed, but

upon the following morning on awakening the left wrist-joint also was painful and swollen so he consented to remain at rest and the three painful joints were wrapped in wool and cotton, and he was given internally ten grains of salicylate of soda every two hours in conjunction with digitalis and phytolacca. After the eighth dose it was to be reduced to once in three hours, and on the following day an ointment of equal parts of belladonna, ichthyol and lanoline was applied to the joints twice daily. Under this treatment the temperature gradually came down and at the end of three days it was normal. The heart had been carefully auscultated every-day and up to this time it was quite free from murmur and both sounds were clear and normal. But at 3 A.M. on the morning of the eighth day of the disease, he had a severe chill lasting ten minutes, followed by a high fever and copious sweating. At 3 P.M. a more severe chill and a temperature of 105° and one hour later sweating. At 3 P.M. the next day another chill; temperature 103½° and sweating. This was repeated again at the same time the following day. He was given fifteen grains of quinine in three doses, and on each of two succeeding days thirty-five grains, during which interval he had no chill, but a free epistaxis, and this was repeated five times the day folfowing. The pain and swelling in the joints gradually decreased but he was still quite helpless. Meanwhile another and last purpuric spot made its appearance on the left elbow, about the size of a silver quarter-dollar, with a white center, which increased peripherally until the whole spot became purulent, finally discharged and then dried up. After this the bile disappeared from the urine (which at no time contained any albumen) and the stools become normal. On the evening of the fourteenth day the temperature rose to 102½°, followed by profuse sweating, but it was not preceded by a chill. Tinnitis aurium present. Afternoon of next day wakened from sleep, not knowing where he was and ideas greatly confused, but not a true delirium—temperature 103 3-5°. Believing these symptoms to be due to the quinine and salicylate, they were stopped, and in twenty-four hours all head symptoms disappeared and he was quite rational again. In a day's time, however, he suffered another chill with fever and sweating, and at this visit a distinct diastolic murmur was present for the first time, which was heard loudest at the second right costal cartilage and transmitted down the sternum—in other words, an aortic regurgitation. At no time had he complained of præcordial distress or pain, and the pulse remained unchanged. Morning temperature 101½°, falling to normal by noon, and patient feeling better and brighter, the right wrist alone remaining painful and slightly swollen. Treatment then was acetate of potash, infusion of digitalis and deodorized tincture of opium.

The next afternoon the patient wakened up in delirium, and the thermometer registered 106½°. At the evening visit it was 104° and by midnight it had fallen to 100 4-5°, his head being somewhat clearer, but a new heart complication, a mitral systolic murmur, was detected. At 8 A.M. the following morning the temperature was again 106½° and the murmur was more distinct.

The treatment was again modified by adding ammonium benzoate and quinine, each five grains thrice daily, to the potassium acetate mixture, but with no beneficial effect, of course, as the case now was one evidently of malignant endocarditis.

The disease ran on for eight days longer; chill, fever and sweat recurred at more or less regular intervals; head symptoms reappeared and symptoms of general septicæmia manifested themselves, until finally the patient succumbed to the ravages of the staphylococcus pyogenes and its toxines, and died four weeks after the initial symptoms of the hepatic derangement. No autopsy was allowed.

A summary review of this case suggests the following thoughts :

I. Prognosis in peliosis rheumatica should always be very guarded.

II. Corroborative evidence is offered to support the theory that this disease is due to an infectious microbe.

III. That the similarity of the symptoms and sequelæ of this disease and of acute articular rheumatism may be due to their both having this infectious origin.

IV. The tendency toward bleeding from the mucous surfaces, as in this case in the occurrence of copious epistaxis, suggests a close relationship between rheumatic purpura and purpura hemorrhagica.

V. That the liver symptoms may have

been due to an infectious congestion from which organ the cocci were distributed by the general circulation to the heart and peripheral capillaries.

VI. In this, as in true rheumatic arthritis, full doses of the salicylates afford, perhaps, the greatest relief to the pain and swelling of the joints.

NOTES ON HYPNOTICS.

J. E. McCRAIG, M.D., PROVIDENCE, R. I.

Among the older medicaments, perhaps no class gave less satisfaction than the hypnotics. Opium and its salts, when given in safe doses, are unreliable as sleep producers. Chloral is dangerous, especially in those cases where its hypnotic action is most urgently desired, where the heart muscle is deteriorated by the strain of long-continued insomnia and lack of nourishment. Both are undesirable from their tendency to habituation. Hyoscine often fails and is always dangerous. The bromides are not sufficiently powerful to be of great practical use, and their depressing effect, when long-continued, makes them undesirable. The newer drugs of this class have given better satisfaction, and although the literature of trional and sulfonal is fast becoming quite extensive, the following notes of cases may not be without clinical interest. They are selected from a number of cases in which these drugs were exhibited, as showing the results under different conditions.

CASE I. Acute delirious mania. A. M., female, aged twenty-three years, Irish; temperature 103° F., pulse 130; respiration 30; tongue brown and dry, teeth covered with sordes; intense motor excitement; incoherent. Had been given morphine and hyoscine hypodermically to produce sleep, but unsuccessfully. Had slept but one hour in the last seventy. Given sulfonal, 1 dram in hot whiskey at 9. P.M. Next morning was quiet after having slept 3 hours. Temperature 100° F., pulse 120; respiration 25. Sulfonal repeated at 9 P.M., after which she slept 5 hours.

This treatment, together with stimulants, tonics, etc.; was continued for thirty days, and she eventually made a good recovery. After the first dose the urine was retained, requiring the use of the catheter for three days.

CASE II. Chronic melancholia. C. B., female, aged seventy-four years, American; temperature and respiration normal; pulse 80; arteries atheromatous, urine normal. Had been taking nightly doses of chloral, gr. xl., for twelve years. Became agitated, and chloral failing when given in reasonable doses, was given sulfonal, gr. xxx, which gave eight hours good sleep. This was continued for three months, during which she improved physically, though no mental change was manifest. At the end of that time trional was substituted in 30 grain doses, which were gradually reduced till six months later she slept fairly well on 7 grains nightly. In this case also the urine was retained, requiring catheterization for 48 hours after the first dose, the drug being continued.

CASE III. Acute melancholia. S., female, aged fifty-seven years, American. Attempted suicide by opening the left radial artery with a pen during the night and bled to syncope. Twelve hours later went into a condition of frenzy, biting, scratching, tearing off her clothing and attempting to injure herself and all about her. At this time the radial pulse was imperceptible. Was given trional, gr. xl, in hot whiskey by the nasal tube, and as she was still violent was given 10 grains more in 15 minutes. Was asleep in 15 minutes after the second dose. Slept 18 hours and awoke quieter. During her long sleep she was awakened to take nourishment once, immediately drooping off to sleep again. At no time were there any untoward symptoms. She finally made a good recovery mentally and physically, trional being given as required to produce sleep.

CASE IV. Acute delirious mania. C. S., female, aged seventeen years, American; temperature 102° F.; pulse 130; respira-

tion 30. Tongue dry, brown and cracked; sordes in the mouth, herpes on lips. Had neither food nor sleep for three days before admission; given trional, gr. xl, and slept 3 hours. Following night slept five hours on the same dose. On the third night, the dose was reduced to 30 grains, on which she slept 6 hours. The drug was gradually reduced to 10 grains nightly, with which she got a good night's rest. She is now convalescent.

CASE V. Acute mania. A. M., female, German; aged forty-three; temperature 99; pulse 100; respiration normal; mitral regurgitation, compensation fairly well maintained. For insomnia, was given morphine hypodermically without satisfactory results. On account of the cardiac condition sulfonal was given cautiously, the initial dose being 20 grains. The first two nights the patient slept very little, but on the third slept all night. This condition was continued for a month, the heart being carefully watched, but no ill effect was observed. She became chronic and died two years later.

CASE VI. Approaching climacteric; M. J. F.; female; aged forty-seven; American; sane. After an attack of dysentery suffered from insomnia, which was assigned to domestic anxiety. Derived good effect from nightly doses of 15 grains of trional, and upon attaining a better frame of mind a month later, abandoned the use of the drug without any trouble.

CASE VII. W. M.; male; aged thirty-two; American; druggist; family history phthisis. Patient suffered from indigestion and insomnia aggravated by business worry. After a sleepless night took 15 grains of trional at 2 P.M. and attempted to sleep. Half an hour later took 15 grains more and was asleep in fifteen minutes. At 7 P.M. he was awakened and, though feeling some giddiness and slight nausea, attempted to do his usual work. When seen at 9 P.M. he had been vomiting, face cyanotic, extremities cold, perspiration profuse, temperature sub-normal, pulse 120, very small and weak. Consciousness was unimpaired and the patient complained of nothing but nausea and cold. He was treated with stimulants; strychnine and nitroglycerine hypodermically, and warmth externally. He soon rallied and slept comfortably all night. He was confined to bed for three days, complaining of nausea upon trying to rise. For some time subsequently he complained of irritability of bladder, and traces of sugar and largely increased urates were found in the urine.

It will be noted that in cases 1 and 2, in which sulfonal was given in somewhat large doses, retention of urine followed the first dose. My former colleague, Dr. Chas. B. Mayberry, of the State Hospital for the Insane at Danville, Pa., has kindly furnished me with notes of a case of maniacal excitement occurring in a paretic dement of one year's standing, in which two 1 drachm doses were given upon consecutive nights. After the second dose the urine was retained and had to be drawn by catheter. In this case, as in one of the former, the urine was normal in quantity and character. In one it was ammoniacal. None of these patients presented histories of retention and they have since had no trouble. I have not been able to find any reported cases of this trouble following the use of sulfonal, but in all these cases we were able practically to exclude any other causation.

In case 7 the ill effects might in some measure be due to the interruption of sleep. I have never observed anything similar following the use of trional in other cases, and I have used it quite extensively both in sane and in insane patients.

It is but fair to state that in the cases quoted I have included all those in which I ever observed any ill effects from these drugs, and omitted as lacking in interest those routine cases in which they were a source of comfort both to patient and physician. In my opinion we have in sulfonal and trional, but especially in the latter, many of the qualities which go to make the ideal hypnotic. Reasonable safety, reliability and freedom from unpleasant after-effects and the tendency to habituation.

For Gonorrhœa.

Copaibæ bals.....	gtts. iv
Ol. santali.....	gtts. v
Ol. cinnamomi.....	gtts. j

Ft. in capsula 1. From six to twelve capsules to be taken in the day, one hour after meals.

Powder for Warts.

Calomel.....	30 | o
Boric acid.....	15 | o
Salicylic acid.....	5 | o
Cinnabar.....	3 | o

Rub into the wart two or three times a day.

COMMUNICATIONS.

APPENDICITIS.*

J. CHRIS. LANGE, M.D., PITTSBURG, PA.

In March, 1893, I reported to this society, *in extenso*, fifteen cases of appendicitis, with recovery in all without operation and without suppuration in any except one case, which terminated in an abscess which was incised without anæsthesia and drained, leaving a sinus which healed three weeks later.

This list comprised all cases treated by me rom 1875 up to the date of the report in which the diagnosis was indisputable. All suspected cases were excluded. The criterion determining admittance to or exclusion from the list, was the presence of a fixed tumor in the right iliac fossa irrespective of how pronounced might be the other symptoms of the disease. It is unnecessary to say that doubtful cases not in the list ended in recovery.

I have now to report to you three additional cases ending like the others in recovery, without operation and without suppuration.

CASE XVI.—March 25, 1893. Male, age twenty-seven. Diarrhœa with pain and nausea on previous day. Induration distinct and painful March 27th. Morphine and calomel one-eighth grain of each every third hour, continued until eighth day, when diarrhœa ensured and morphine and bismuth were given. Tumor gradually decreased in size and was lost April 20th. Patient has since been well.

CASE XVII.—May 3, 1893. Male, age seventeen. Vomiting and nausea two days. Constipation and pain in right iliac fossa. Tumor very tender; feels as long and thick as about three fingers; longitudinal axis coincident with that of colon. Calomel and morphine one-eighth grain each every three hours. Considerable tympanites. Powdered charcoal was given in large quantities; also iodoform in three grain doses four times daily for three days. Vomiting ceased after second powder of calomel and morphine. Tympany moderated after fourth day of treatment. Tumor now very perceptible, is hard and well defined. Upon the eleventh day of treatment, first movement of bowels. Three additional movements same day. Tumor perceptibly decreased in size. Morphine and calomel discontinued. Patient desires to arise, but is kept in bed as long as any induration can be felt and receives five grains of subgallate of bismuth every six hours. Light diet and no other medication. Tumor steadily decreasing in size until June 10th, when patient is allowed to leave his bed.

CASE XVIII. Male, forty-five years of age. Was seized upon the street with faintness, vomiting and great pain in region of navel, October 14, 1894. Was carried into a neighboring house and from there removed to his room at the German National Bank. Temperature 102½°. Pulse 120. Was given one-eighth grain calomel and morphine every three hours, and on the 16th was removed to West Penn Hospital. Tumor very distinct; long, narrow and tender. For tympanites was given five grains of subgallate of bismuth. Morphine and calomel continued until 14th day, when for the first time there was a passage from the bowels and at the same time an elevation of temperature, which for seven days had been normal, to 102°. This temperature being maintained upon the 14th, 15th and 16th days of the disease, during which time he had one or two stools daily, I decided an operation necessary. After consulting with Drs. Murdock, Macfarlane, Cameron, Hiett and others at the hospital, 11 o'clock, November 3d, was fixed for the operation; this being the 17th day of the disease. Patient that night was again given one-eighth grain of morphine every third hour with five grains of subgallate of bismuth. He presented at the time for operation a condition so much improved in every respect that my associates who again saw him, agreed that operation

*Read before the Allegheny County Medical Society, December 18, 1894.

was uncalled for. After this time he had no temperature elevation; his tumor grew steadily smaller, and he was dismissed November 22d.

The very considerable progress in the etiology and pathology of appendicitis recently made, throws a new and much brighter light upon this disease than we before possessed; and much strengthens a suspicion that appendicitis frequently is, and always may be made a surgical affection by improper treatment. It gives to the "foreign body" etiology its death-blow and answers the questions: Why, as a vermiform appendix corresponds so closely in structure with the rest of the intestine, is it so frequently the seat of disease as compared with the other portions of this tube? Why, as the same pathological laws govern the appendix as govern the other tissues of the body, do they assert themselves here so much more frequently than elsewhere? The "foreign body" etiology can no longer hold its former rank. It rested upon error and the possibility of always finding fæcal concretions in the appendix or in the abscess resulting from its inflammation, at every operation. It is now established that identical fæcal concretions are found in almost every appendix in bodies dead from all causes; and also in almost all laparotomies done for other diseases. In other words, these fæcal concretions are contained in all appendices favorably conformed for their capture and imprisonment; *i.e.*, the vast majority. They are therefore innocent in the production of inflammation in the appendix as in other parts of the intestine.

Dr. George R. Fowler, in operations embracing more than two hundred cases, found foreign bodies, or anything that could be construed in any sense foreign, in but two cases. One of these was a gall-stone, the other an enterolith of calcareous salts. I quote from Dr. Fowler's recent work: "The etiology of appendicitis was supposed in former times to involve the presence within the appendix vermiformis of cherry stones, grape seeds, lemon and orange pips, date stones, fish bones, pins, etc.

"This belief seems to have been based upon evidence which is deemed insufficient by scientific men of the present day, although it is not denied that traumatic appendicitis may occur.

"The belief that the disease is frequently due to the engagement of foreign bodies in the cavity of the organ is based, to a large extent, upon purely speculative or imaginary conditions. In all probability the notion that cherry stones, lemon and orange pips, or date stones are largely responsible for the occurrence of the disease is based upon the fact that the little masses of fæcal matter which have been moulded into shapes accurately representing these bodies are found during the evacuation and irrigation of an appendicular abscess. It has happened more than once during an operation of this character at my hospital clinic, that one or another of the bystanders has exclaimed, as the little mass of fæcal matter came into view, 'a lemon pip,' or, 'a date stone,' so strong a resemblance was there between these masses and the bodies mentioned. In every instance, however, the fact was that they were, with the above mentioned exceptions, made up of moulded fæcal matter as was demonstrated by simply flattening them out between the thumb and finger. Beyond the little masses of fæcal matter which become imprisoned in the cavity of the appendix by the occurrence of constriction, either at the point of communication with the cæcum, or at some other portion of the tube nothing in the shape of a foreign body, other than those mentioned, has been found in my experience to account for the conditions present.

"The ease with which fæcal matter may retain its position in the cavity of the appendix may be easily understood when the facts in the anatomy of the organ are borne in mind. These are:

"First, the fact that it usually occupies a dependent position in the large majority of cases; hence gravity alone will aid the passage of fæcal matter into its interior, and also favor its retention there.

"Second, The absence of well-marked circular muscular fibres gives rise necessarily to a very feeble expulsive power. Hence it may be said that the appendix vermiformis does not have that inherent power of emptying itself which other hollow organs, supplied with longitudinal and circular involuntary muscular fibres combined in proper proportions, possess.

"In addition, anatomical studies and clinical experience (examinations made of healthy appendices during laparotomies)

unite to support the assertion that fæcal matter is found in a considerable number of appendices in individuals who had never suffered from the symptoms of appendicitis.

"The mere presence of masses of fæcal matter, therefore, cannot be looked upon as necessarily producing the disease, even though these become more or less hardened by inspissation. This hardening process takes place after their imprisonment, and is due to absorption of the watery elements after the escape of the fæcal matter is cut off.

"In this condition they may, by their presence, produce in an already inflamed and partially devitalized organ, ulcerative changes, or even extensive gangrene, by still further interfering with the normal circulation. That they do not necessarily give rise to the disastrous perforation which is so frequently a marked feature of the disease is shown by the fact that they are not always present when this accident occurs. When they are present they are rarely found at the point of ulceration but are located, in the great majority of cases, either above or below the site of perforation. Moreover, cases are observed in which the entire outer structure of the appendix has sloughed away as a result of a violent inflammatory process, leaving the mucous membrane as an intact blind sac with fæcal matter in its interior. Whatever fæcal matter, either fluid or solid, chances to be present plays but an accidental role. It is not even necessary that these fæcal masses should produce either ulceration or even a lesion of the mucous membrane. As a matter of fact, their physical qualities are usually such as render it altogether probable that they produce no primary lesion; but that in their soft condition they may remain, for an indefinite period of time, within the tube without doing harm. That fæcal masses do occur within the cavity of the appendix vermiformis without the occurrence of inflammatory processes is proven by the frequency with which their presence is noted in post-mortem examinations, as well as in laparotomies performed for other conditions."

We must recognize from the relatively frequent occurrence of inflammation of the appendix a predisposing cause, which does not obtain in other parts of the intestinal tube; and recent anatomical and physiological peculiarities pointed out by Dr. Van Cott, Jr., and Dr. Fowler, as well as pathological and bacterial processes, make this quite definite.

The comparative anatomy of the cæcum demonstrates that in man the appendix is an organ of evolution; the rudimentary remnant of the lengthened cæcum found in all mammalia except in man; and as far as its origin is concerned, this is the natural result of developmental changes involving in intra-uterine life, the forward and downward enlargement of the cæcum. Further, the blood supply of the tissues of the appendix, the peritoneal, the muscular, the subcutaneous and the proper mucous coat, is a scant supply. This fact demonstrates a low tissue vitality. This is all the more true because the only nutrient artery of all these coats, which comes from an anastomosis between the mesenteric and colic arteries, allows the appendix a terminal circulation only. It is limited to this one artery. It can receive blood from no other source, because it and its branches anastomose with no other vessels. Because its circulation can receive no assistance when this becomes necessary; because no collateral circulation can be established in these four coats of the appendix, they are necessarily liable to the consequences of deficient blood supply which involves a low tissue vitality and a lessened power of resistance.

It is this which is the predisposing cause of appendix disease; in further proof of which it is important to note that in females the appendix has a slight additional blood supply, namely, through the appendiculo-ovarian ligament; and that this constitutes the only discoverable reason for the proportion of cases of appendix disease; namely, twenty per cent. for females and eighty per cent. for males.

The certainty that the appendix, as no other structure in the abdomen, is peculiarily susceptible to inflammation is explained therefore by the comparatively low vitality of its tissues which determines changes in their nutrition and inability to resist all manner of attacking agents. When to this natural predisposition is added one or other of the determining or direct causes, then inflammation of the appendix tissues happens.

The direct causes of appendicitis, quite unable to act in other portions of the in-

testinal tube because of their better blood supply and their consequent better nutrition and greater power of resistance, and for the same reasons able to act only in the proportion of one in females to four in males, are *torsion of the appendix and infection by the bacillus coli communis.* Infection alone is adequate to inflame the appendix tissues. When torsion is the process which, added to the predisposing cause, causes the inflammation, then infection is soon added.

It is to be remembered that the tip of the appendix is free, movable by its own peristalsis and also by the peristalsis of its contiguous intestinal coils; by changes of their calibre and position the appendix is subjected to alternating pressure and freedom from pressure and to changes in position as well as to flexions, distortions, angulations and twistings very slight degree of which, quite inadequate to do this in other portions of the intestines, are competent here, because of the low vitality of the tissues, to induce nutritive changes ending in appendix disease. This they accomplish by inducing blood vessel alterations, sometimes thrombosis, sometimes chronic connective tissue hypertrophy of vessel coats, and by degenerative changes in the trophic nerves. These changes have been found in certain cases to have their beginning not in the appendix tissues themselves, but extending to these from the meso-appendix. After the development of these changes for a longer or shorter time, probably for years, they interfere with the nutrition of the appendix to a sufficient degree to cause inflammation, gangrene, or probably much oftener, connective tissue hypertrophies and contraction of appendix tissue. These chronic vessel and nerve lesions are accountable for the frequency of appendix diseases primarily and give opportunity, by devitalization of appendix tissues, to the pernicious action of the always present bacillus coli communis. This infection is facilitated further by the retention in the appendix of the product of its mucipa-rous glands, some serum and perhaps some fibrin, these substances forming an excellent culture medium for the bacillus and also inviting and entertaining the pus-forming cocci, which together with the bacillus coli communis are found in appendicitis always when pus is present for which the cocci are indeed responsible.

The same result is obtained by the bacillus coli communis without the aid of angulation, twisting or pressure upon the appendix tissues, whenever from thrombosis or arterio-sclerosis or neuritis the appendix tissues reach a sufficient low vitality to be unable to longer resist penetration, multiplication and toxine formation on part of the bacillus coli communis, always present in the appendix, as in the intestine at large.

Hodmypl has shown that this microörganism is present in the intestinal canal in health; is discharged with fæcal evacuations constantly and exists always in the appendix. It would take rank therefore, with the non-pathogenic bacteria were it not that under certain tissue conditions its behavior is most virulent, inasmuch as it is readily assisted in the production of lethal lesions by the early advent of the pus-forming cocci.

Among the tissue changes favorable to penetration, multiplication and toxine formation on the part of this organism, is that of the tissues of the appendix—a low vitality. A vitality which may be designated normal and which exists throughout the tissues of the intestines elsewhere, keeps the bacillus non-pathogenic; the vitality of the appendix tissue, however, which is below normal, allows it to become pathogenic because of decreased resistance to its tendencies. These tendencies are to penetrate the mucosa; to multiply and form absorbable toxines in the sub-mucosa, and to reach the peritoneal coat and the cavity through the muscularis; and, superadded to this, to call to its aid the pus-forming cocci for the production of abscess.

The bacillus coli communis is found in the peritoneal cavity upon the serous covering and the adhesions of the appendix; and also, in conjunction with the pus-forming cocci in every appendix abscess. The question of abscess, or no abscess, hinges, therefore, upon the ability of the bacillus coli communis to bring to its aid, in its destructive efforts, the pus-forming cocci; and the important consideration is this, can treatment prevent the advent of the cocci, thus limiting an inflammation of the appendix to the exudation of fibrin and serum, which happens because of the activity of the bacillus communis alone?

In other words, can medical treatment limit the inflammation to an adhesive one?

Can medical treatment be responsible for pus formation? The last question I venture to answer with: Yes, medical treatment of appendicitis can determine pus formation.

I cannot proceed to any remarks upon the treatment of appendicitis without mention of its surgical side, because the discussion which is to follow has been usually devoted to the question of medical or surgical treatment almost exclusively. As this question may for once be ignored, and the medical treatment discussed with more time and profit, at least to me, I concede to surgery the following: Every appendix abscess demands operation. In all cases of doubt operation is indicated. The operation is comparatively safe when done by those whose surgical technique and modern methods have demonstrated the safety of their procedures.

How can the administration of medicine prevent the formation of abscess when this is possible, and what means and measures will most certainly induce pus formation in appendicitis, are the questions most interesting to me.

Autopsies and operations have demonstrated that in certain cases there is gangrene of one or more of the appendix coats, and also that these cases are rare. In 145 operations reported by Dr. Murphy, of Chicago, this condition was present 17 times. When present, it is unnecessary to say that medical treatment is vain. In a few cases there was a fibrinous exudate only, this number being about 12. All the others were cases of intra or extra-peritoneal abscesses, and, therefore, properly treated by surgical means. The time for medical treatment had expired in these latter cases. Medical treatment of abscess is vain. But medical treatment for the prevention of abscess is usually effective as shown by my list of cases. It, as a rule, will limit an appendicitis to a fibrinous inflammation only. This is accomplished by antisepsis of the intestinal canal and by rest of the tube. The object of the first is to destroy or to prevent multiplication of the bacillus coli communis, and the advent of the pus-forming cocci; the last to prevent, or to limit, as much as possible, the production of the inflammatory exudates which precede the advent of the pus cocci in the tissues of the appendix as everywhere else.

As my list of cases demonstrates, I have satisfactorily accomplished both of these objects by calomel and morphine. In the latter cases additional local antisepsis by guaiacol, iodoform, the subgallate of bismuth and charcoal was used in connection with calomel, which is a germicide acting, not only locally, within the tube, but also throughout the tissues of the body at large. In the earlier cases, when antisepsis was not understood; when it was not known that the beneficent power of mercury was its germicidal power; when it ranked as an alterative, and in inflammation as a sedative and an antiphlogistic, and was credited with the power of preventing or limiting inflammatory exudates, it was used for its then known effects. Now that it is understood how the specific treatment of syphillis by mercury is a germicidal treatment, and that the treatment by mercury of many and various conditions of disease in many and various tissues of the body is germicidal, this invaluable remedy finds many additional uses, and is employed in appendicitis as a general and constitutional antiseptic, penetrating the tissues and destroying or limiting the multiplication of the bacillus coli communis; endowing the epithelial and other barriers with a power of resistance which prevents penetration or multiplication in their tissues and the cavity of the abdomen. In addition and for the purpose of making the media in the intestinal canal as unfavorable as possible for the existence of all bacteria, guaiacol or iodoform, was given these patients, and when detension happened the subgallate of bismuth or charcoal.

Essential to the prevention of every case of appendicitis from a necessity for surgical interference, barring the rare cases of gangrene, is absolute rest of the bowels secured by morphine. No pus cocci can come, no abscess can form without a previous inflammatory exudate—serum and fibrin. The more violent the inflammation the larger is the proportion of serum and cells, the smaller that of fibrin, and vice versa. A fibrous or plastic exudate is favorable to organization, a serous exudate, corpuscular or croupous lymph, to pus formation. Absolute rest, the abolition of function of a part is, and always has been, known to limit the exudate of inflammation, to increase in this exudate its fibrin, or fibrin-forming elements, to

lessen in it serum and cells; in other words to make it favorable to organization, unfavorable to pus formation. This is true also of the appendix tissues. It is a medical as well as a surgical aphorism, as old as medicine, that inflammation requires first and always rest of the part, and this is as important in appendicitis as in any inflammation. Why does the surgeon splint the limb with extension in hip joint disease? Because, when done it limits the exudate, makes this fibrinous, unfavorable to pus formation. I have heard the questions asked: How can benefit come to a joint from rest and extension and counter-extension, when tuberculosis exists in it? How can quiet remove the tubercular tissue? The answer to these questions applies also to appendicitis. Rest fortifies all tissues; motion always involves waste; motion is always an expense; rest always a saving. In the hip-joint, when these tissues are taxed to withstand the grey tubercle or the yellow nodule of Virchow, the vitality of the tissues which is saved them by rest is the factor which enables them to encapsule tubercle, to make it innocuous, to prevent everything but a fibrinous, or, if still milder, a productive inflammation with no result but a temporary ankylosis. With this we are all familiar. We are also familiar with neglected cases of hip joint disease, in which the patient, not restrained in the use of his limb, and allowed to have this jerked by muscular twitchings during his sleep against the walls of his acetabulum receives the abscess and bone death which are so common. Here by the continued expense of motion to the tissues, these are unable to encapsule the tubercle; they are attacked by the tubercle plus the motion, and this combined expense they cannot cover. From want of ability to resist both these factors these tissues are devitalized and their blood vessels exude much serum, many cells, and little fibrin, and then invite the pus-forming cocci to peptonize them. This is the manner of formation of an abscess in hip-joint disease from want of rest. The manner of formation of abscess in appendicitis is identical, if for the bacillus tuberculosis be substituted the bacillus coli communis. Rest is as important in the one case as in the other. When it is possible to prevent pus formation rest to the part is an imperative and necessary factor of treatment. For this reason my cases all receive morphine, not for pain, except as necessity may dictate, but for the abolition of peristalsis; for the purpose of limiting exudation, which so limited is an adhesive inflammation only; an exudate of cement *i.e.*, fibrin; or if more chronic a productive inflammation, both innocuous and not corpuscular lymph which precedes and invites the pus-forming cocci. As my list of cases shows this may be accomplished, if not always, certainly, usually. Now as certainly as a tubercular hip joint will go on to pus formation if motion of the joint be not abolished, so certainly will purgation in appendicitis produce pus. The same is true of enemata, high or rectal, because all will move the contents of the bowel, agitate it and cause peristalsis. It is my firm conviction that no better method to prepare appendicitis for the surgeon can be employed.

If even the foreign body etiology were not now understood to be erroneous, how improbable, impossible, it must be recognized to be, that purgation can remove the offending body in the appendix held by secretions and inflammatory products and in a cul de sac. What possible advantage then can come of purgation?

Error alone, a misconception of pathology, the belief that the tumor or swelling consists of an accumulation of fæcal matter can, I conceive, be the only excuse for purgation. The tumor does not consist of fæcal matter in the appendix or cæcum, but of infiltration of the tissues and of the exudate within and upon them, and it can never be purged or washed away nor lessened by purgation or enemata. On the other hand, what injury can come from confining the contents of the bowel for any reasonable period of time when the gases of fermentation are absorbed by charcoal, fermentation is prevented by the subgallate of bismuth and the whole contents of the bowel kept innocuous by antisepsis?

As the primary cause of appendicitis, namely a low tissue vitality, is universal; as this is common to the human family; and, as when the appendix of any individual is once subjected to inflammation which, because this occurrence demonstrates a vitality low enough to produce it, is presumptive evidence that it will repeatedly inflame, there are but two con-

siderations which prevent assent to the proposition that an appendix once inflamed should be amputated. The first objection to this conclusion is that it cannot always be done. In Dr. Murphy's cases, 145 in number, it was removed in 60 cases; not removed in 68; and in 17 removal is not stated. No surgeon, no physician could fail to appreciate the necessity for operation in these cases. They were strictly not operations for appendicitis, if the twelve cases where the exudate was fibrinous be excepted; but on the other hand, operations for intra or extra-peritoneal abscess. In these cases it is seen, therefore, that presumptive future inflammation and its danger is not obviated by operation because of failure to remove the appendix in over fifty per cent. of these cases. Nevertheless, with the exception of the few who immediately died, the balance of the 68, still in possession each of his appendix, are presumptively cured. How unjust to not allow this term *cured* to apply to cases medically treated also; but to prophesy recurrecne because of the continued presence of the appendix.

The truth is that, and this constitutes the second objection to the proposition that the appendix once inflamed should be removed, in both the inflammations, medical and surgical, the nutrition of the appendix tissues is so decidedly altered, the tissues so decidedly changed, that the previous conditions rarely obtain. The more or less chronic inflammation of recurrent appendicitis, which is a productive inflammation, produce tissue requiring decidedly less blood than does normal appendix tissue; and the same is true of what remains of the appendix when it cannot be removed after a surgical inflammation. In either case it cannot be asserted that the previous causative low vitality of tissue persists.

Of the previous fifteen cases reported I have found eight, and in but one was there a recurrence, and it was so mild that medical aid was not summoned.

CHEMICAL AND BACTERIOLOGICAL CHARACTERISTICS OF MILK.

T. M. ROTCH, M.D., BOSTON, MASS.

There are certain questions regarding the chemistry of milk which, though not necessarily of vital importance to its use as a food, are still sufficiently so to make them worthy of our investigation. The first of these questions which I shall consider is the reaction of cow's milk both at the time when the cow is milked and later in its use for food preparations. This question of reaction is of so much greater importance in connection with the feeding of infants during their first year than for the later periods of life, that I shall discuss it with special reference to infant feeding. The importance of the subject lies in the well-recognized fact that the infant's digestive functions have been from time immemorial best adapted to the digestion of an alkaline or neutral fluid rather than to an acid one. Human milk has proved to be the food on which the greatest number of infants live and thrive during the first year of their lives, and on which the smallest number die proportionately to any other known food. Whether the moderately alkaline reaction of human milk is an important factor in the problem of infant feeding is a question which future investigation alone can completely prove, but with our present knowledge we are not yet prepared to dispense with even the least important of the many factors which make up this problem. At any rate we should be very suspicious of a breast milk which showed an acid reaction. In the preparation of food from cow's milk, according to the latest experiments by means of modification, the best results have been obtained from making the reaction of this food correspond to that of normal human milk. This, up to the present time, has best been done by means of the addition of an alkali, which is the only foreign element which it has been found necessary to employ.

My attention was first called to the pos-

sibility of obtaining an alkaline cow's milk corresponding in its reaction to that of human milk, by Mr. G. E. Gordon, who has by his extended and intelligent investigation of this subject carried on for so many years in the West, given such a stimulus to these questions of chemical interest. Many years ago it was noticed that cows fed on certain pastures such as occurred in Kentucky, represented by the Kentucky blue grass, and also in many other parts of the West, produced at the height of the season of such grass a product which was alkaline rather than acid, and which remained alkaline for a number of hours after milking. It is also, of course, well known that milk in general, wherever it is produced throughout the world has an acid or at least an amphoteric reaction. This information at once incited the investigation of the food values which existed in these peculiar pastures. Careful analyses showed that the nitrogenous elements of this grass had a certain proportion to its carbohydrates, namely, about 1 to 5½ (Kuhn.) It has also been noticed by this same class of observers, from whom we have derived the only real knowledge which we have of this subject that cows which are fed in their stall on comparatively dry foods produce a milk which is distinctly acid in its reaction. We would naturally suppose that by merely combining nitrogenous and carbohydrate foods in the proportion of 1 to 5½ the resulting product would resemble closely the product of the cows fed upon the pasture grasses already mentioned. This, to some extent, has proved to be true, but not so completely as is to be desired for the precision needed in infant feeding. It is therefore of the greatest importance to the solution of this question that experiments made in supplying the carbohydrate proportion of the food by feeding freely (ten pounds to each cow daily) with sugar beets of the highest saccharinity has accomplished empirically unlooked-for results.

The cows which were experimented with in obtaining these results were under observation for three months, and were cared for in the same barn and under the same general conditions. Two-thirds of this herd were fed on the ordinary food ratio of 1 nitrogenous to 5½ carbohydrates. The remaining third of the herd was also fed on the same ratio, but this ratio so far as the carbohydrates were concerned, was made up partly by Austrian sugar beets grown for this purpose. No beets were given to the first two-thirds of the herd just spoken of. During these three months when the experiments were being made the reaction of common litmus paper was constantly as follows: The cows fed partially on the beets showed neutral or feebly alkaline reaction, and the cows that received no beets showed a uniformly acid reaction.

A still more delicate test of the reaction of the milk of the entire herd was made by Dr. Austin Peters, of Boston. Hay and grain, as previously stated, were given without beets to two-thirds of the herd, and ten pounds of beets for each cow continued to be fed to the remaining third. The milk of the whole herd was then mixed together in one vat, was tested in the vat, was then quickly transported to the laboratory, a distance of twelve miles, and again tested. The results of these experiments were as follows: The milk from the cows which has been fed with beets was tested directly in the pails at a temperature of 93° F.

Blue litmus paper gave no change whatever.

Red litmus paper was turned slightly blue.

Cochineal and ammonia paper turned still bluer.

The next experiment was made directly from the vat, which, as I have already stated, contained the mixed milk of the whole herd. The temperature was 42° F.

Blue litmus paper showed no change.

Red litmus paper was turned slightly blue.

Cochineal and ammonia paper was turned still bluer.

The same milk was then carried twelve miles, and on being examined in the laboratory with cochineal and ammonia paper turned the paper just as blue as when the milk was tested at the farm. This second experiment is of great interest as showing that the product of the cow can not only be made to correspond to that of human beings, by means of perfectly natural feeding and under perfectly normal conditions, but that this alkaline modification can be produced to such a degree that one-third of the milk is sufficient to destroy by its alkalinity the acidity of the remaining two-thirds.

The next experiment is a question of bacteriology, and is also of considerable importance in the practical use of cow's milk as a food. It has already been found by certain observers that the first portions of milk drawn from the human breast may contain bacteria, while the later part of the milk is sterile. Acting on Mr. Gordon's suggestion, Dr. Austin Peters made the following experiments at the Walker-Gordon barns to determine whether like conditions existed in the milking of cows. Dr. Peters was dressed in a freshly-boiled white suit and cap, and had his hands and arms thoroughly washed with a 1:1000 bichloride of mercury solution. The cow's udder, teats, flanks, sides, groins and abdomen were also washed with the same solution and dried with a freshly-boiled cloth. The milking was then done by Dr. Peters into sterile bottles with the following results:

Of the four cows milked for this experiment, selected without special reference, the bottle No. 1 in each of the following tables represents the first portion of the milk drawn by the hand of the milker directly into the sterile bottles. No. 2 in each table represents milk drawn through a sterile canula directly into the bottle, while Nos. 3 and 4 respectively in each table represent milk drawn by hand after more than one-half of the udder had been emptied. A bacteriological examination of the milk in these bottles by Dr. A. K. Stone, gave the following results:

Bottle.	Colonies.	Colonies.	Colonies.	Colonies.
1	141	157	19	53
2	0	0	1	2
3	0	6	0	0
4	0	0	1	2

To summarize the above, we find that the direct milking of the first half performed by sterile hand shows a milk with a comparatively large number of micrococci and fine bacilli of the same general appearance respectively. We find further, that the milk drawn through the sterile canula was practically sterile, and the milk drawn in the second half of the milking by hand was so uniformly sterile as to awaken the suspicion that the isolated colonies might have been the result of the manipulation between the "cow and the plate."

These experiments at once provided us with a means of producing a milk practically sterile but not sterilized. This experiment also seems to prove that the bacteria which are found in cow's milk do not necessarily come from external sources, whether they be of the cow herself or her surroundings, but that they may also come from some part of the milk tract between the udder and the end of the teat. These conclusions, it may be said, are made with reference to healthy cows.

ANALYSIS OF THE MINERAL MATTER OF HUMAN MILK.

Up to the present time, although a certain number of analyses of the mineral matter of human milk have been made, yet the results for various reasons have been deemed unsatisfactory. Such large quantities of milk are needed for a satisfactory determination of the percentages of each element which make up the total amount, that this in itself has been an important reason for failure in accuracy. The mineral matter of cow's milk on the contrary has not met with the same difficulty in its determination, and has been presented to us in its elemental percentages in a reliable form. As it has always been known that a radical difference exists between these elemental percentages in cow's and in woman's milk, the knowledge of the exact percentages which exist in the latter has lately become of still greater importance, since such decided advantages have been made in the modification of the other elements of cow's milk.

With the view of making some advance in this difficult question and providing for the milk modifiers of the future, a more exact basis for perfecting a substitute food resembling as closely as possible the product of the human breast, I undertook, in the spring of 1893, to procure an unusual and sufficient quantity of human milk for analytical purposes. In the course of a few weeks, by means of the concerted action of numerous assistants, notably that of Dr. Stickney, I collected five and a half litres, which is an unusually large quantity for experimental purposes. This milk was immediately reduced to its mineral constituents in the laboratory of Dr. Charles Harrington. The analysis of this large amount of mineral matter was then jointly made by Dr. Charles Harrington and Dr. L. T. Kinnicutt with the following result:

Unconsumed carbon		0.71
Calcium phosphate	$Ca_3P_2O_8$	23.43
Calcium silicate	$CaSiO_3$	1.35
Calcium oxide	CaO	2.54
Magnesium oxide	MgO	0.96
Iron oxide	Fe_2O_3	0.40
Alumina	Al_2O_3	

I make no report on the potassium and sodium salts, as their analysis was not considered satisfactory and is being made over again.

In comparing the previous analyses which have been published and which can be found in König's Nahrungsmittel, II., 2. Auflage, with this new analysis, we must remember that the previous analyses were made some years ago. In the last few years the processes which are employed have been so much more exact that the results must be considered far more trustworthy than those made at an early date. It is not remarkable, therefore, that decided differences should be found between this new analysis and those which have hitherto been made and presumably this last analysis is the correct one. It has been made with the most absolute care and by means of the most improved technique, by two eminently competent and well-known chemists, who in their work have acted as controls on each other. In this way great precision has been attained.

The chief differences between this new analysis and all previous ones are as follows:

1. The phosphoric acid is less than half as much as previously reported.
2. The magnesia is also less than half as much.
3. Silica and alumina are present; they have not been returned in any previous analysis.

Assuming the truth of the statement that the constituents of the mineral elements of human milk are subject to great fluctuation according to individuality and other causes inherent to the human race, it is right to presume that the mineral matter examined by Kinnicutt and Harrington, being the product of a large number of women, is a fair average specimen.

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

STRYCHNINE SUBCUTANEOUSLY IN PERIPHERAL POLYNEURITIS.

Dr. A. Stodart-Walker (*La Semaine Medicale*, No. 1, 1895) in three cases of peripheral polyneuritis obtained excellent results with hypodermic injections of strychnine. One of them was a confirmed drunkard; the second had had rheumatism and was a drinker, while the antecedents of the third were negative. All three were incapable of getting about and were forced to keep their beds; they experienced pain both spontaneously and upon pressure at points corresponding to the affected nerves. Several groups of muscles showed undoubted signs of atrophy; there were anesthetic plaques and the knee-jerk was absent in the first two, increased in the third patient. In these three cases the salicylate of soda, salol, the iodide of potash and salicylic acid had been given in vain, when hypodermics of strychnine caused an almost instantaneous amelioration which progressed to recovery, with complete restoration of motion and sensation. The remedy was injected three times a day, in an initial dose of a half milligram and gradually carried up to two milligrams at an injection.

THYROID FEEDING IN OBESITY.

Drs. Leichtenstern and Wendelstadt (*La Semaine Médicale*, No.1, 1895) of the Augusta Hospital of Cologne, Germany, observing the rapid decrease of weight in patients with myxœdema under treatment by extract of thyroid glands of sheep tried it in simple obesity. In 22 patients out of 25 they obtained a rapid decrease in weight which they attributed to a more active combustion of fat in the organism than to the diuresis which is noticed regularly when the patients first are put upon this treatment. This diminution is

* In charge of the translator, F. H. Pritchard, M.D.

especially rapid at first and gradually becomes less and less. It varies, according to the observations of German physicians, between one to five kilograms the first week and from one and a half to nine kilograms in several weeks of treatment. The remedy may be either employed alone or in connection with a special dietary.

[Dr. Yorke-Davis (*La Semaine Medicale*, Annexes p. clxx., 1894) has already reported satisfactory results with this remedy, in the treatment of obesity.—*Trans.*]

STRYCHNINE IN SNAKE AND SPIDER BITES.

Dr. Mazhar Hossain (*Indian Medical Record*, No. 6, 1894) was called to a Hindu woman of twenty-two years who had been bitten on the big toe by a brownish white cobra, four feet long and three inches in circumference. Her companions saw the snake glide away after having bitten her. An hour after she felt giddy, became insensible and salivated profusely. She was brought three miles into the city to her home. One dram of liquor strychniæ (grs. iv. to an ounce of water) was given in four ounces of water and administered in four doses by the mouth with intervals of fifteen to thirty minutes. After the first two doses she became conscious and continued so all that night and the next day. The day following all the symptoms reappeared; she was salivated, her whole body excepting her corneæ was insensitive, her pulse weak and thready, respiration shallow and about three a minute, and every two or three minutes she convulsed. Deglutition was impossible; the bitten foot was slightly swollen, the marks of the serpent's teeth being distinctly visible. Two injections of twenty drops each were made subcutaneously; in six hours no improvement, except that her pulse was strong and full; the injection of twenty drops was repeated. In ten minutes she came to but could not speak. Injection repeated again in fifteen minutes. Three hours after she was conscious but could not speak; the injection repeated and fifteen drops left to be taken by the mouth. The next day she was improving but still speechless; twenty drops of the liquor strychniæ every three hours. At two o'clock of the third day she regained the use of her voice and all the symptoms then disappeared except a feeling of dull pain over her whole body. Twenty drops of the remedy were ordered three times a day by the mouth for four days, and she soon recovered completely.

A correspondent of the same journal reports a case of bite from a venomous spider which was successfully treated by injection of $\frac{1}{15}$ gr. tablet of strychnia. He was bitten on the penis by a black spider with a red back. Three hours after he was in great pain and almost fainting. He complained that he was loosing the use of his legs; his pulse was rapid, 112, and he was very nervous and much frightened. Immediately after this he fainted and became very drowsy, but in ten minutes he brightened up and became quite calm, the pulse returning to the normal state. The injection had a very marked effect, for though still in great pain he improved from hour to hour and the next day felt well.

DEATH FROM INUNCTION OF MERCURIAL SALVE.

Dr. Sackur (*Memorabilien*, No. 7, 1894) reports the case of a girl of twenty years who after local application of a mercurial salve to numerous "cracks," rhagades, on her hands was soon seized with nausea, vomiting of greenish matter and fainting and she appeared as if very ill. The vomiting continued every quarter of an hour, with tenesmus and slight albuminuria while the temperature was normal. The left arm was of a grayish white and glistening appearance with moderate swelling, yet without fluctuation. Deep incisions upon the volar and dorsal surfaces exposed grayish, dirty and gangrenous subcutaneous and muscular tissue. Though there was no enlarged spleen and the temperature was normal a gangrenous phlegmon, with sepsis was diagnosticated. The next day anuria was noticed and several bloody stools were passed, with colic. The temperature became subnormal, the bloody passages increased in frequency and were of nearly pure blood; violent hematemesis set in and small ulcers formed on the margins of the tongue. The symptoms ag-

gravated and death took place on the fifth day. In all about five grams (ʒj ¼) of the salve were rubbed into her hands but the anemia of the patient undoubtedly aided the poisoning.

AMENORRHŒA.

In *L'Union Medicale du Canada*, No. 10, 1894, in amenorrhœa the following pill is warmly spoken of:

Mercury, bichlorid.....	gr. ¼
Arseniate soda.....	gr. j
Exsiccated sulph. iron....	gr. xxx
Carbon. potash.....	gr. xv
Extr. Nuc Vom.....	gr. v

Sufficient for thirty pills. One before each meal.

LEMONADE FOR DIABETIC PATIENTS.

In the *Journal Des Practiciens*, No. 5, 1894, the following lemonade is suggested for diabetics who suffer from thirst and who beg for a drink, with a sweet taste:

Citric acid.....	5	o	grs lxxvij
Pure glycerine.....	20-30	o	ʒv-ʒj
Pure water.....	1000	o	ʒxxxj. ʒij

To be drunk in small quantities during the twenty-four hours.

BORIC ACID IN CONJUNCTIVITIS.

In the *Medical Chronicle*, No. 6, 1894, the following prescription is recommended in conjunctivitis:

Boric acid.....	grs iv
Borax.....	" xij
Destilled water.....	ʒj

To be used as a collyrium.

POISONING FROM A BELLADONA PLASTER.

Dr. F. J. Clendinnen (*The Australian Medical Journal*, No. 9, 1894) was consulted by a man thirty-five years of age who complained of lumbar pains, was ordered to apply a belladonna plaster of eight by ten inches to his spine. In four days the pains had gone, but he still kept the plaster on. Six days after this he awoke in the morning feeling thirsty and giddy, had no appetite, and on trying to read found that his sight was dim. He attempted to do some business but found that he talked nonsense and was brought home. When seen at 6 P.M. he was delirious and almost unconscious, skin very dry, tongue coated and dry, pupils somewhat dilated and inactive. He had hallucinations of sight and saw ants crawling over his bedstead. He said that he had a hydatid in his brain and wanted to be operated on. He was restless and was continually making imaginary cigarettes and smoking them. The belladonna plaster was still on; it was removed and the skin cleaned thoroughly. His condition rapidly improved and he was practically well twenty-four hours afterward.

ERGOT AS AN OXYTOCIC.

Professor J. G. Swayne (*British Medico-Chirurgical Journal*, No. 9, 1894) thinks ergot to be indicated in long and lingering labors where there is an absence of uterine contractions and consequent lack of dilatation of the parturient canal. This is contrary to the general obstetric views of to-day yet he has confirmed it in a recent case of a young woman of twenty-five who had borne three children and had to do a great deal with deficient uterine contractions during her labors. At the one that the writer attended the waters broke early in the morning and no pains followed; the head of the child could be felt above the os pubis through the anterior lip to be in the ordinary position yet the cervix was soft and cushiony; no "show" and no signs of impending labor. This condition of matters continued for two days, unchanged, when the mother noticed that the fetal movements were no longer to be felt for several hours. The heart sounds and placental murmur were faint though scarcely audible. The liquor amnii which still flowed away at times was found stained with meconium. The cervix was still undilated and no pains appeared. He administered twenty drops of the (American) fluid extract of ergot which he prefers to that of the English pharmacopœa. In twenty minutes from the time of its administration he noticed a distinct uterine contraction; the same dose was repeated in half an hour and again given after half an hour. In three hours and a half from the first giving the drug she had strong and regular pains, the cervix was well dilated; a drachm was then administered and after half a dozen strong pains she gave birth to a fine boy. At first it made no respiratory effort though the umbilical arteries pulsated feebly; he kept up continuous pressure on the uterus until the placenta was expelled during which time the cord was not tied. Artificial respiration, etc., restored the child after half an

hour of effort. Then everything went on well with both mother and child. He admits having transgressed the rule, but with multiparæ with a soft and dilatable os and no pains the state is different from delayed labor in primiparæ from a rigid os; here ergot would do serious injury.

COCAINE IN VOMITING IN PREGNANCY.

Dr. A. Naylor (*The Australasian Medical Gazette*, No. 8, 1894) is an enthusiastic advocate of local application of a solution of cocaine to the cervix, in the vomiting of pregnancy. He tried it with success in one case. He had tried all measures without any great benefit and she had become emaciated to such an extent that life was a burden. A Sim's speculum was introduced, the vaginal roof and cervix were painted with a 15 per cent. solution of cocaine and probe wrapped with cotton and soaked with the solution was introduced into the cervical canal to the extent of about three-quarters of an inch, but with great care. Vomiting ceased with the first application, but nausea still remained. After five daily applications she felt much better, gained flesh and soon looked remarkably well. He thinks that this measure should be tried before abortion or premature labor is attempted as a relief.

INTERSTITIAL INJECTIONS OF CARBOLIC ACID IN FACIAL CARBUNCLE.

Dr. Altmann (*Ibidem*) reports the case of a young man of seventeen years who was affected with a malignant carbuncle of the left side of the lower lip, with submaxillary glandular enlargement, pronounced general symptoms, as high fever, extreme pain, restlessness, a coated tongue, no appetite and slightly albuminous urine. Under local applications of a bichloride solution and poultices he grew worse. Four days after he was seen interstitial injections of a 5 per cent. solution of carbolic acid (ʒjss in all) were made into different parts of the tumor. The local and general symptoms had, the following morning, greatly ameliorated; the injections were continued for two days with decided improvement, and in six days from the first injection he returned to work.

[Dr. Graff, of Christiania, Norway, recommends interstitial injections of pure carbolic acid into carbuncles and indurated boils of the back of the neck. He has injected as much as two hypodermic syringefuls in twenty-four hours into the malignant facial carbuncle of an old woman without noticing the slightest symptoms of poisoning by the drug. He thinks it the remedy par excellence in carbuncles, as the relief of pain and local as well as general symptoms is so immediate and striking.—*Trans.*]

LOCAL APPLICATION IN ECZEMA.

L'Union Medicale Du Canada, No. 10, 1894, recommends in eczema the following local application:

Oil sweet almonds } Glycerine }	.....	āā ʒiij
Oxide Zinc	.....	ʒjss

The *Covremennaya Klinika*, No. 10, 1894, speaks highly in the treatment of emphysema of the lungs, of the following pill:

Arseniate soda	o ss	gr 1-32	
Iodide potash	o ss	" j	
Powdered rhubarb	o ss	" j	
Extr dulcamara q s			

Sufficient for one pill.

For the first few days one pill a day, after which one may increase the dose to two a day.

IODIDE OF POTASH IN CROUPOUS PNEUMONIA.

Dr. Werner (*Memorabilien Hft.* 7, 1894) holds that the iodide of potash is a specific remedy in the early stages of croupous pneumonia of adults, for, if administered within the first twenty-four hours, it may act so as to abort the disease. He has tried it in eleven cases under these conditions and is satisfied with the results. Dr. Mueller, of the Posen military hospital warmly praises its serviceability in the early stages of the disease, which he has confirmed in many cases.

EFFECT OF VACCINATION UPON WHOOPING COUGH.

Dr. Bolognini (*La Semaine Medicale*, No. 1, 1895) has vacinnated thirteen children affected with whooping cough as was recently suggested by other Italian writers as a means of treating whooping cough.

These observations have shown if done at the beginning during the first or at the beginning of the second stage of the disease it will decrease the number of the coughing attacks and diminish the intensity of the affection. Its favorable action will begin to be noticed in one or two weeks. Occasionally, it is preceded by a transitory aggravation of the symptoms. Naturally, where there is no development of pustules from a spontaneous or acquired immunity inoculation will be ineffectual. Therefore, if a child has whooping cough and has not been vaccinated this measure may be done for it will not exert any deleterious influence upon other remedial or hygienic measures.

SALVE FOR ACNE ROSACEA.

In the Russian journal (*Covremennaya Klinika*, No. 10, 1894) in the treatment of acne rosacea, the following salve is praised:

Ichthyol	2 parts
Resorcine	1 "
Collodion	30 "

Apply locally.

CHRONIC INVERSION OF THE UTERUS TREATED BY ELASTIC PRESSURE.

Dr. Christopher Martin (*The Birmingham Medical Review*, No. 10, 1894) recently observed a young woman who four months after delivery presented a chronic involution of the uterus with persistent flooding which had rendered her very anemic, though, still she was able to be about. All attempts at manual reduction of the firm, hard, small and pear-shaped uterus were unavailing, even under chloroform, so he tried continuous pressure by Tait's cup and stem repositor, applying a medium sized cup to the fundus and by means of elastic cords attached above to a waist belt and below to the stem he was able to exert gentle but continuous upward pressure on the fundus in the line of the axis of the pelvic brim. At the end of eighteen hours the cup had returned the cervical portion and only the fundus remained inverted. He then removed the cup and was able by firm upward pressure on the fundus by two fingers in the cervical canal, to effect complete and final reposition. He then washed out the cavity of the flaccid uterus with hot iodine water, administered ergot freely and thus got the uterus to contract. After this the patient recovered without a bad symptom, and she was sent home, at the end of two weeks. Since then she has menstruated regularly and normally and is now in excellent health. The continuous pressure of the repositor gave her considerable pain which required the free administration of morphia during the reduction. He regards manual taxis as useless in the reduction of chronic inversion and believes in the serviceability of continuous elastic pressure. With but a superficial examination in such cases the inverted uterus might have been mistaken for a uterine polypus and an ecraseur applied, with disastrous results. The history of the case and absence of the uterus above the vagina were, however, quite diagnostic.

THE GLYCEROPHOSPHATES IN THERAPEUTICS.

Dr. A. Robin (*Nouveaux Remedes* x. 9, p. 203, 1894) recommends hypodermic injections of glycerophosphates of lime subcutaneously in states of nervous depression, for these salts act fully as well as Brown-Séquard's preparations of testicular juice which contains an uncontrollable quantity of the same drugs. The daily dose is 0.25 gm. (grs. iv). He claims to have obtained good results with them in neurasthenias of various origin, albuminuria, phosphaturia; to have caused a decided increase in weight in Addison's disease and favorable results in sciatica and trigeminal neuralgia. In tabes the results were uncertain beyond an amelioration of the lightning-like pains.

ELECTRICITY IN AMENORRHŒA.

Dr. Doeblin (*Archives d'Electricite Medicale*, No.24, 1894) reports on twenty-three cases of amenorrhœa treated by the faradic current. Fifteen of these were completely cured while four others remained in the same general condition which had brought on their menstrual disturbances. Three women after considerable amelioration were lost from sight and in only one case of amenorrhœa, complicated with obesity was the result absolutely negative. He gives no precise indications as to the intensity of the current nor the number of applications.

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SATURDAY, FEBRUARY 16, 1895.

EDITORIAL.

AN OVERCROWDED PROFESSION.

It is not gratifying to professional vanity to be compelled to admit that medical services are subject to the same law of demand and supply which obtains with any other commodity. We may fancy that unbusiness-like methods of collecting and unlimited credit extended to every stranger, are evidences of a charitable spirit and of the inherent differences between the proper conduct of a business and a profession. In many other ways we may seek to explain certain peculiarities in the relation of doctor and patient which do not exist in the case of lawyer and client, nor in that of salesman and patron, yet, after all, there is but one explanation, the overcrowded state of the profession, in which each competing doctor jostles his fellows for the sake of getting patients—as a vague possibility, patients that will pay large fees; by preference, patients that will pay something; but, if a last resort, any kind of suffering humanity that may serve as clinical material.

It seems harsh to rate professional service as a commodity. Such is not the ideal conception. It is rank heresy according to the articles of codal faith. But professional orthodoxy, like the wind, bloweth where it listeth; we hear the sound thereof, but cannot tell whence it comes nor whither it goes. Habitual practice, however, is cognizable by senses other than the hearing—too often the combined evidence results in convicting the sound-sense of falsely impersonating "sound sense." Under existing conditions it is not too much to characterize as commodities, professional services of which one may obtain, by mail, a descriptive catalogue, together with a price-list—usually suggesting liberal discounts; services for which one may go shopping and make the rounds in search of a bargain. A common experience of well-known practitioners, and especially of metropolitan surgeons, is to meet in their consulting rooms some person coming directly from the office of an-

other physician, who inquires the price of some specified service; objects that "even Dr. Blank charges only so much" (always a less amount), and names other doctors who are yet cheaper; asks if the fee named is the lowest; remarks that the matter will be considered and a decision made, and leaves the office to visit the practitioner next on the list. To assent to such a condition of affairs is to enter into competition. And the methods usually taken to persuade possible patients of the superior character of the services offered, may be not inaptly termed "jostling." Undoubtedly the jostling is done in an extremely ethical and courteous manner, and of the two skeletons in the doctor's closet, the reminder of his osteological studies is the less carefully concealed.

Consider our prominent surgeons—and the same is true to a less degree of other clinicians: the work from which they gain skill and upon which they establish reputations is done in the free clinics; the surgery by which they live, is small in proportion. One can go through our cities and find not one physician's residence which would be remarked upon by a stranger. In a neighboring city, of the twenty or more doctors' houses betokening that fortune has been liberal though not lavish in her gifts, all but two have been acquired through inheritance or marriage. Of these two, one is the home of an old bachelor whose long years of economy have gained him the name of being penurious, while in the other is sunk the entire salary of an unexpected term of political office.

The world owes every man a living, if he will work for it. It owes as much to the man who fits himself for a profession and performs faithfully the arduous duties of a physician, as to the one who sells needles and thread, or who juggles with real estate. The physician has a right to expect a living such as will place him on a par with his natural associates, while the laity have a corresponding right to demand that no one shall become a physician who is not worthy to mingle with the substantial and intellectual part of the community.

The average man, making an investment of three years of time and, let us say, five hundred dollars in addition to his actual expenses, ought to be practically assured of a comfortable income at the expiration of the three years. Here is the brief history of one who used the same logic with regard to medical practice. A young man of good education, fair ability and excellent habits, after a thorough course in medicine, decides upon a location, and having a small income, marries. His wife is a woman of good birth and breeding, of splendid education, of natural good sense and willing to help her husband in all the little ways by which a doctor's wife can add to his list of friends and possible patients. In spite of fair prospects, he fails to make a living, though assisted by the influence and to some extent, by the money of relatives. The wife while pregnant, over works; partly from the lack of needed care before and after confinement, she develops pyæmia and dies. Some blame is, naturally, attached to the husband; in addition to his bereavement, he is obliged to begin life anew in a strange place, with added burdens and without the stimulus of youthful hope and ambition. Such dramatic tragedies are rare, but the lives of thousands of physicians are cursed with the unromantic, every-day poverty that may not claim the sympathy of the world, but that is none the less hard to bear.

If the evil of an underpaid medical profession went no further than the requirement of self-denial on the part of the physicians and their immediate families, we should regard it with equanimity as the common lot of a certain proportion of all mankind. But a poorly paid pro-

fession means a poorly treated public. Chemicals, drugs, instruments, books, the time and freedom from financial worries necessary for the thorough study of cases and the acquisition of new knowledge, not to mention in detail the routine expenses of keeping an office—all these cost as much as the entire living expenses of families of moderate means. The public fails to realize that a physician with a gross income of two or three thousand a year, is no better off than a clerk on a salary of one or two thousand, and, on the whole, the medical profession does not care to have the fact made too patent.

It is self-evident that with two men doing one man's work, each will receive not more than half of one man's wages. As a matter of fact, the urgency of competition will compel each to accept a little less than half. The American profession, in proportion to the total population, outnumbers the European profession four to one. Considering, however, the greater diffusion of wealth in this country, it is a conservative statement that the average American physician could double his list of patients without adding materially to his fatigue; indeed with the conveniences which a doubled income would afford, the actual labor might even be diminished. Conversely, with better opportunities for experience and with a better armamentarium, the physician's services would be of greater benefit to the community at large.

We doubt if there will be much controversy over the opinion that the medical profession is seriously overcrowded.

SOCIETY REPORTS.

ALLEGHENY COUNTY MEDICAL SOCIETY.

December 18, 1894.

Dr. J. Chris Lange opened the discussion of the subject announced for the evening, entitled

APPENDICITIS.

(See page 226.)

DISCUSSION.

DR. ADOLPH KŒNIG: I think that a paper of such great interest and importance as the one which has just been read, should receive a thorough discussion. I myself feel thoroughly in accord with what the reader of the paper has said regarding the etiology and treatment of appendicitis, and I cannot understand how surgeons in their text-books will insist that medical treatment of appendicitis is worthless and should not be made use of except at the very beginning, and to a very limited extent. My experience with this disease is limited to perhaps fifteen or twenty cases. In every case in which the disease came under treatment within two or three days after its beginning a favorable result was obtained. I have within the last eighteen months seen two cases in which suppuration took place, but both of these cases had been under treatment by homœopaths for typhoid fever for about a week, until a condition of suppuration existed. Of course they did not get the proper treatment, such as spoken of by Dr. Lange. I have no doubt whatever that if the system is saturated with mercury to a sufficient extent, that the life and activity of the bacillus to which this suppuration is without doubt due, is cut short and its pathogenic action prevented.

DR. J. D. THOMAS: I think the paper a most interesting one. The doctor has spoken of the separation of those cases requiring surgical procedure from those not requiring operation. With regard to the treatment of these cases, of course there is no criticism to be indulged in because the doctor don't exclude operative measures, but the subject of medical treatment might be criticised somewhat. I can say that I have seen quite a number of cases of appendicitis, some of which were operated upon, and others were not operated upon. None of these cases were medically treated, as suggested by the author of this paper; that is, they were not treated with the mild chloride of mercury and morphine. At one time I had three cases on hand, one of which died. The cause of death was rather an unusual one for this disease. It was a clear case of appendicitis, but after three or four days the pain disappeared from the region of the caput and passed around to the region near the spine. The pain over the appendix disappeared entirely. The pain in the back only lasted a day or two, and after that the pain was ascribed to the liver—over the left lobe of the liver. I expect in this case, instead of suppuration taking place about the appendix, that the lymphatics carried some of the poison up into the liver, and I was having a case of abscess of liver. The man died and I secured the privilege of an autopsy. There was no peritonitis. There had been a perforation of the appendix at its point, and the point had become adherent to the peritoneum. The abscess traveled up behind the peritoneum; there was pus between the diaphragm and the liver. The right pleural cavity was full of pus. Now if this case had been operated on in the loin at the commencement of the disease, I am fully satisfied that the patient would have had a fair chance of recovery. This case is not necessarily unique, but it is rather out of the common. It is a very difficult matter to know which cases to operate upon and which to treat medicinally.

About six months ago a case was sent into the South Side Hospital. The temperature was about 100° F. There was very little pain over the region of the appendix, but there was a distinct tumor. The patient came into the hospital in the evening for operation. It was really a case in which I would hardly think it necessary to operate; but the man was all ready for the operation, came prepared for it, and if we did not operate he might think that he was not getting the proper treatment; the treatment he expected. The next day I operated. The man walked into the room, jumped upon the table and certainly did not seem to be a very sick man. I removed the appendix, which I found to be perforated, and there was also evidence of pus formation. It was a case for operation. The patient recovered.

I think the great majority of the cases would get well under proper treatment and without operation. The great questions for me to decide are: What cases require operation and what cases do not? Of course if there is an abscess discoverable an operation is indicated.

I will recite another case. The patient came to my office with all the symptoms of appendicitis. He had been treated by an irregular for colic. The patient was walking about the street. I had him lie upon my table, and upon examination I found an induration as large as a saucer—a large saucer—in the region of the appendix. I sent him home to bed and kept him quiet. From day to day the induration diminished in size and the patient recovered.

DR. R. W. STEWART: I think the paper a very valuable one, in that it treats so fully of the etiology of appendicitis. It also shows us the rudimentary character of appendix and its lowered vitality from lack of function and scantiness of its blood supply. Thus far, there are no points for us to discuss or upon which to differ. The doctor has stolen the thunder of the surgeon by stating that an abscess of the appendix is beyond the reach of medi cine, and that in cases of doubt as to the presence of pus it is advisable to operate. I will concede with the doctor the perniciousness of the rule that an appendix once inflamed should always be removed. I think a rigid adherence to that rule would work a great deal of harm. But I must also express my opinion that his views regarding the efficacy of medical treatment are a little extreme. I think his results are unique considering the methods of treatment.

I also doubt the philosophy or logic of some of his arguments. For instance, his

statement of the power of calomel as an antiseptic. I question very much whether calomel has the efficacy which he ascribes to it as an antiseptic. I question, for instance, his reasoning upon the point of syphilis. He claims the results come from its antiseptic properities. Then how does he account for the many years necessary for treatment? And for the fact that large doses are often less efficacious than small doses? I question also its antiseptic action upon the appendix, because the inflamed appendix is shut off from the general alimentary tract and the local application of an antiseptic is impossible. I therefore fail to see how, with his calomel, he can hope to reach the bacillus coli communis in such a situation. I also question the action of morphine in arresting the function and quieting the parts. The doctor has stated that the appendix has an extremely low vitality, a very scant blood supply and that it is almost devoid of muscular fibers and possesses no function, therefore the administration of morphine can have little effect upon the appendix itself.

Dr. Mark A. Rodgers: I would like to ask Dr. Lange whether he considers the bacillus coli communis a pyogenic micro-organism, or if he is of the opinion that it merely prepares the tissues for invasion by the streptococci and staphylococci of pus formation by lowering the resisting powers of the tissues. If he takes the latter view I think that he differs from almost every modern bacteriologist.

I take exception also to the analogy which he draws between the process of tuberculosis and inflammation, and in this he is also somewhat at variance with most modern pathologists; for, according to the best modern authorities, tuberculosis, with syphilis, leprosy, etc., are classed with the specific granulomata and are not inflammatory processes. I therefore fail to see the analogy which the doctor points out.

Dr. X. O. Werder: I think the paper just read is a very scientific one. There are only a few points upon which I cannot agree with the doctor. The first point is regarding the frequency of the disease in the male over that found in the female. He claims that it occurs in eighty per cent. in the male to twenty per cent. in the female. I think that the disease is just as common in the female as in the male. In the woman many cases are undoubtedly associated with diseases of the ovary or tube. In many cases of abdominal operation I have found a diseased appendix and have frequently come to the conclusion that the diseased appendix was the primary cause of the pelvic trouble.

There is another matter. Dr. Lange says that Dr. Murphy, in his one hundred and forty-five cases, removed the appendix in sixty cases; but failed to remove it in sixty-eight cases. That may all be; I have not seen the statistics. It can be very easily explained. The abscess may be found to exist in the peritoneal cavity, but completely surrounded by adhesions and shut off from the general cavity. In such a case the duty of the surgeon is merely to open and treat the abscess. It is not his duty, and not wise, to hunt for the appendix. All that he should do is to attend to the abscess and let the appendix alone. I think this is the explanation why Dr. Murphy did not remove the appendix in sixty-eight cases.

Another thing that struck me in Dr. Lange's paper, and that was that Dr. Murphy found pus formation in such a large number of cases. I was present at the last meeting of the American Association of Obstetricians and Gynecologists at Toronto, at which Dr. Murphy discussed appendicitis. His advice was to operate early, at once, the same hour if possible, whenever appendicitis was present. The fact that in spite of such early operations pus was found in such a large number of cases shows that pus must be present often in the beginning of the disease.

Dr. Lange cites a case in which everything was ready for operation, but at the last moment such a marked improvement was shown that the operation was postponed. Now what happened in this case? It was undoubtedly an abscess. It could not have dragged along from seventeen to twenty days without pus formation. What happened? The abscess ruptured into the bowels. Improvement followed at once. I have had just such a case. I remember it was on Sunday night that I first saw the patient. I decided on operation and directed the ambulance to call for him Monday. The next day, before the ambulance arrived, I went to see the boy and found a marked improvement.

The nurse showed me a vessel in which I found a good deal of pus. I think many of these cases rupture in this manner. I think Dr. Sonnenburg takes this position, and is correct. In all cases where tumefaction and tumor is shown in the right iliac region, diagnosed as appendicitis, there is pus formation, and frequently these cases do require operation. Many cases do not rupture into the intestines. The liquid portions become absorbed and the residue remains there, perhaps, in the future to cause a new inflammation. In a manner these cases resemble very much the condition we find in the tubes in salpingitis. The time will come when we will remove the appendix in appendicitis just as we do a tube in salpingitis.

Dr. J. M. Batten: I always feel like taking a conservative stand in matters of this kind. If we take into consideration the theories of Dr. Lange, surgeons often operate unnecessarily in very many of these cases; and I think considering the results which he has shown that his paper should receive careful attention.

My experience bears me out in saying that I do not think appendicitis is a very difficult disease to treat; nor a very dangerous one, even if it runs to suppuration. I have had several cases of it. Some of them convalesced without operation; and in others when pus had formed, operations were performed and the patients recovered. I think there are too many operations for appendicitis, and think that if there were fewer operations there would be a greater percentage of recoveries. Dr. Thomas has said that it is very difficult to know just when to operate and when not to operate. Dr. Lange in his paper recommends operations only when we have pus formation. I do not think it a very difficult matter to discover an abscess in a case of appendicitis, provided the case has reached that stage.

Dr. James W. Macfarlane: The gentleman at my right hand (Dr. Batten) does not think it a very difficult thing to tell when there is pus formation in appendicitis. If such were the case there would not be such divergence of opinion as has been shown here to-night. Perhaps Dr. Lange is a little too enthusiastic on the one hand, and my friends, the surgeons, too positive on the other. I think we should be willing to concede, to a certain extent at least, the efficiency of Dr. Lange's treatment. I agree with what Dr. Werder has said regarding the treatment of appendicular abscess and the limitations of the surgeon's duty with regard to the removal of the appendix under such circumstances. This is especially true where you have a good-sized abscess. Surgeons may be a little too ready to operate; but, on the other hand, medical men are often so loath to operate, or to consent to operate, that valuable time is lost.

There is one thing that seems to me should have due consideration in the discussion of this disease; namely, the disposition to have hernia follow an operation for appendicitis. This liability may not be so apparent in the results of certain operators as that of others; still it is liable to occur in the hands of the most expert surgeon. This fact should not deter us from operating, but shows that too great care cannot be taken to avoid this complication.

Dr. C. C. Hersman: A number of years ago I can remember when most cases of this character were treated under the names typhlitis and perityphlitis. To-day the enthusiast calls everything appendicitis. In the few cases which I have had none were operated on. Possibly but one should have been operated on. That case died. The post-mortem revealed a rupture of the appendix and a general peritonitis. I presume if she had been operated on early good results might have been obtained. So far as treatment is concerned, either medical or surgical, I am inclined to think, with some of the gentlemen present, that it is a difficult matter to determine in the earlier stages, whether there is pus formation or not. In some of my cases I could make out no swelling whatever. I had a case of this kind not very long ago upon which I had consultation. My consultant was a very competent gentleman. I had made out no swelling and he found none, but there was great tenderness and pain over the region of the appendix and a pronounced tympanites. There was no operation performed. The patient was treated medically and made a recovery.

So far as the calomel treatment is concerned I have my notions about it. I employ it in combination with morphine. The morphine sets the patient at rest and quiets peristalic action. So far as relieving or controlling the function of the ap-

pendix is concerned I am not able to say that I have ever found any function for the appendix except that of giving its possessor trouble.

I cannot accept the statement that calomel in such small doses acts so powerfully as an antiseptic. I do believe that calomel is one of the greatest therapeutic agents we have in increasing the activity of the glandular system of the alimentary canal. I think this is its action. It increases the activity and fortifies the economy against the ravages of the disease. It helps to carry off the disease, to get rid of it. Another reason why it does not act antiseptically in affections of the appendix is because it does not penetrate. The blood supply of the appendix is of such a limited character that I do not think that the medical agent can possibly act directly within the substance of the appendix. I think instead of an antiseptic action it is by increasing the activity spoken of a moment ago that the drug produces good results and fortifies the glandular system against disease and helps to get rid of it.

Dr. G. M. Shillito: All the cases of appendicitis which have come under my notice have recovered with the exception of one. At the autopsy of the latter case we could find very little evidence of inflammation, almost none at all, of the appendix; but there was a rather extensive peritonitis. The first thing we found upon opening the appendix was a grain of corn cut through in the middle and therefore, in this case at least, there was a "foreign body."

Dr. J. M. Duff: I fortunately can say that of a number of cases of appendicitis which have come under my care (and in a number of the cases my diagnosis was confirmed by others) nearly all recovered. The cases which came early under my care recovered with aid of medical treatment. I recall the case of one patient who died. He did not come under my care until there was pus formation. This case was seen by a couple of gentlemen who are here tonight. This case resembles the one referred to by Dr. Thomas very much indeed. There was an abscess of the liver and a breaking through of pus into the peritoneal and pleural cavities and discharged through the lung. There was formation of pus in the lung. I am willing to admit the efficacy of medical treatment for appendicitis if the case comes under the physician's care in the early stages. I believe that every case of appendicitis should be operated upon. I feel I am justified in taking this ground for many reasons. I say in every case, unless it might be a few cases which come into the hands of experts who have a fine diagnostic ability which is not in the possession of the great majority of medical men. I do not like to be radical—to be extremely radical. I do not wish to take a radical stand upon any subject as a rule, but I will ask you to consider calmly this question in all its bearings.

I don't deny but that Dr. Lange has had excellent success in treating these cases medicinally; and that others without doubt have also had excellent results from medical treatment. Dr. Lange admits that there are certain cases in which the surgeon should operate. He then goes on and states that the appendix possesses a very low order of tissue, and he follows that up by stating that the plastic exudation which becomes organized after an attack of appendicitis is of a still lower order of tissue. This lower order of tissue does not require so great a degree of circulation, but we do have a tissue that is liable to disintegration, to gangrene and to disease from interference with the small degree of circulation which it still possesses; in consequence we are liable to have a recurrence of the disease, although Dr. Lange has endeavored to make this percentage a very small one. There is certainly liability of a recurrence.

There are two points in favor of an immediate operation. In the first place you are not always able to tell whether or not there is pus formation in the earlier stages. The second point is the liability of a recurrence. Then it may rupture and the pus discharge internally, causing peritonitis from which cause the patient may die in a few hours. If you don't operate at once you are running some very grave risks. Arguing on that line it would not be wise to wait until you have positive evidence of pus formation. In the earlier stages operation is practically without danger.

We must most assuredly take into consideration the liability of recurrent attacks. We live in an age of rapid transit. Our friends are no longer confined to a circumscribed locality. We have become a

traveling public; here to-day and there to-morrow. A person who has suffered from appendicitis is never safe away from home and away from a skilled medical attendant who understands his case thoroughly. They don't know what moment they may come down with an attack; an attack that may prove very serious, perhaps culminating in death, if unable to to receive the proper treatment. With the removal of the appendix we may say that the liability of a recurrence is practically abolished. This liability of recurrence must receive attention. In the cases to which I will now make reference two or three of the gentlemen present can verify my statements. I refer to two cases in each of which there had been an attack of appendicitis apparently cured by medication; but in both cases there were recurrent attacks from time to time, and finally both cases were operated upon. A third case was operated upon as suggested by Dr. Werder, for ovarian trouble, and we found that the original trouble was an appendicitis. There had been recurrent attacks in this case also. In the first two cases mentioned, in both of them, there was pus formation. In one, however, there was no more than five drops of pus; but there was plenty to show under a macroscopic examination the presence of pus, and it was so pronounced by the gentlemen present. In the other case there was perhaps a half teaspoonful of pus. With that condition there is always danger. There is also danger of its rupturing within the peritoneal cavity and setting up a severe peritonitis.

Let me repeat: I am inclined to be very radical in the treatment of this disease. My opinions have been formed from conversations with Dr. Murphy and other surgeons of large experience and from my personal observations. I feel that I am perfectly justified in making the assertion that every case of this kind should be operated upon as early as possible.

I may modify my opinion when I have the assurance that we can prevent pus formation positively in the majority of cases, and when we have diagnostic symptoms pointed out to us defining the borderline, so that we can say thus far and no farther can we depend on medical treatment.

DR. J. E. RIGG: I wish to also state that I think it is very difficult to decide when to operate and when not to operate. There is a great difficulty in ascertaining positively if any pus formation exists, especially very deep seated. There may be deaths which result from lack of operation. A case may be occasionally lost in this way. But, on the other hand, there has nothing been said to-night about deaths resulting soon after operation, or of the death of persons who have been operated on at some preceding time. I believe there may be deaths traced to the operation which might have been avoided if treated medicinally. I do not believe that Dr. Lange's cases are so much above the average of cases of other physicians which are treated medicinally, although perhaps not exactly according to his method. I believe his results are about on a par with the general run of cases.

You will all admit that the surgeon finds difficulty, at times, in recognizing tissue, especially diseased tissue. Take a congested, inflamed tissue; cutting through one tissue you are rapidly approaching the contiguous one, and frequently you will cut through an adhesion and into the bowel; sometimes in more than one place, as I have seen. You then have the bowel to attend to, and perhaps other complications will arise and the patient die before he is out of your hands entirely. Now if you take the cases which die as a direct or indirect result of the operation in a given number of cases, and compare with the number whom you may conjecture die from *not* being operated upon, I believe the statistics will be in favor of not operating. Unless there is the most positive proof of pus formation, I do not see the necessity of taking an extreme view of this matter. Of course I believe there are cases which should be operated upon; but their number, in my opinion, is quite limited and calls for the best judgment of the physician or surgeon.

The question brought up by Dr. Macfarlane with reference to the liability of hernia following an operation for appendicitis should receive consideration. I have seen it frequently following this operation and causing no little inconvenience and trouble.

I have a number of cases of appendicitis. One of them, after three attacks, has now had none for twelve years. The

three attacks were all in one year. There was a good deal of tumefaction extending over to near the region of the umbilicus. There was not a very long period of time between the attacks; perhaps three months as I recall it now. When I last saw the patient there had been no trouble for twelve years.

I was called one morning to see a little boy. The case diagnosed as appendicitis and consent of the parents obtained for an operation to be performed that day. He had taken sick the day before. I gave as my opinion that we ought to wait a little time before resorting to such extreme measures. The case was not operated on, and after a short time was well and has remained well since. I think the wiser plan is to wait and watch the progress of the patient a while before deciding upon operation.

Dr. E. B. Borland: I agree with Dr. Lange in his plea for early treatment in this disease before the formation of pus. This is my observation also; but I don't think the diagnosis of abscess is so extremely difficult. There is the characteristic temperature, the characteristic pulse, etc.; and these signs, taken in connection with the local symptoms, point to the formation of abscess. I do not think that pus forms within two or three days from the beginning of the disease. I think the action here is much like abscess in other tissues of similar structure. Possibly they may form a little more rapidly; but abscess in most of the other tissues of the body takes several days at least, oftener one week, and sometimes two or three weeks, to form as in case No. 18 of Dr. Lange. During this period is the time for active medical treatment. Now if these cases are attended promptly and treated as scientifically in the early stages, as other similar inflammations, then there is seldom need for surgical interference. Pus formation is, I think, the only indication for operation.

Dr. Lange's paper refers to the lessened vitality of the appendix after an attack of appendicitis. It seems to me that we often forget the conservatism of nature and the power of nature to organize and build up a tissue wherein there has been no pus formation or where the formation of pus over an extensive area has been prevented.

Dr. W. W. Potter: I think one of the most trying times in the life of a physician is the time when he must determine when to operate in a case of this disease and when to withhold the knife. I would like to agree with Dr. Lange in his treatment. In the great part of it, it is good. I must disagree, however, in the matter of locking up a loaded bowel. I believe this would be decidedly detrimental. A thorough cleaning out in cases that are seen early and then a locking up of the bowel seems to me the better procedure. At this time much can be accomplished by the application of ice externally.

Dr. J. J. Green: I am a little like some of the others here to-night, somewhat inclined to both sides. I have treated a reasonably large number of cases of appendicitis. In the early part of my career, some of these cases were treated under the name of typhilitis, some under the name of perityphlitis, and also under the name of paratyphlitis; we now are inclined to call everything appendicitis. I am not quite willing, at the present time, to say that all the trouble in the region of the right iliac fossa is appendicitis, and I guess the weight of authority is with me. I wish, however, to express my interest in Dr. Lange's very able paper which holds very nearly to my opinion, except in some minor particulars. There may be other obstructions in the intestinal canal which must not be referred to the appendix, although situated in the right iliac fossa, and presenting a well marked sausage-shaped tumor which Dr. Lange has relied upon for his diagnosis mainly. I am not able to state in what per cent. of cases the sausage-shaped tumor can be detected. In Dr. Osler's work, I think it is mentioned as about seventy-five.

I don't believe in postponing operations too long. However, I have postponed operations in a case or two, perhaps three, and afterwards operated when it was too late. I failed in one case to distinguish a tumor or any systemic disturbance at the end of one week which would justify me in pronouncing it a case of pus formation. The case was afterwards operated upon and an abscess was evacuated which contained from four to six ounces of matter. The abscess was very low down in the right iliac fossa.

It is my practice to bind up the bowel very early in the treatment of the disease.

I also agree with Dr. Lange very heartily in the use of calomel in these cases. But I fail to see the ability of the agent to reach the whole alimentary canal and produce such a powerful antiseptic action. Dr. Lange seems to have sailed on a remarkably calm sea Nearly all of the physicians with whom I am familiar have met disaster in both channels. The exact time to operate in all cases is very difficult to determine. I am quite confident that when an operation in appendicitis is demanded we should not place the hour for the operation a minute later than is actually necessary for the preparation of patient and instruments.

DR. LANGE in closing the discussion said: I am obliged to you, gentlemen, for the consideration given my rather positive position. Feeling the truth of my position, I mean my insistance that purgation and enemata can do only evil in appendicitis, I am constrained to be emphatic because this is against all teaching and all text books. When I presented my list of cases here before, my success was called phenomenal; again this evening it has been so classed. If any insinuation of error or misstatement is meant by this term, I bear it with equanimity and assure you it is undeserved. In eleven of the first list of cases published I had associates. I named them. In the serious case reported to-night I have named my associates. There was no doubt about diagnosis.

Dr. Werder explains why Dr. Murphy did not remove the appendix in so many of his cases. No criticism of Dr. Murphy was in my mind and none could be implied in my statements. I have seen many cases of appendix operations and am, like you all, familiar with conditions very common which make removal impossible or bad surgery. I know that when the surgeon has emptied and drained the abscess his whole duty is done. I cited the fact as illustrative of how operation does not insure the future safety of the patient, any more than medical treatment can do this, when the appendix must be left, which was in sixty-eight of Dr. Murphy's operations. The fact that more or less appendix tissues sloughed can be only considered on a par with changes of these tissues when inflamed and medically treated. What these changes are, to what extent they may prevent recurrence, no one can estimate of individual cases nor of aggregates. This applies to both medical cases and surgical cases where the organ must be left—in Dr. Murphy's more than 50 per cent.—68 cases.

Dr. Werder further states that my last case recovered because an abscess emptied into the bowel. Here is the patient's chart: His temperature was 101 8° and steadily at that. There is no temperature below normal. There is no hard pulse. There is no sweat. The tumor was not diminished in size. There is not one sign of pus. The stools were carefully examined. Dr. Werder's assumption is not warranted. On the other hand the quiet of the intestines enforced by a return to the administration of morphine in conjunction with the subgallate of bismuth prevented pus formation at this crisis; and this was appreciated by the surgeons who with me observed it.

Dr. Rodgers objects to my analogy between hip inflammation and appendicitis, and holds tuberculosis as an affection not inflammatory. Tubercle belongs to the new formations. But whenever and wherever it exists in the body it involves an inflammation. The bacillus builds for itself, if I may so express myself, an habitation, the grey nodule of Bayle, composed of leucocytes, lymphoid cells and giant cells which it occupies; and this, undergoing transformation by caseation, *i.e.*, becoming the yellow nodule of Virchow, is destroyed, together with its seat, living tissue, leaving an ulcer, *i.e.*, a solution of continuity surrounded by a zone of inflammation. The bacillus coli communis is non-pathogenic in the healthy intestines, but becomes pathogenic in the appendix when its tissues become sufficiently devitalized to admit penetration of its mucosa.

Dr. Shillito's case where a grain of corn perforated the appendix belongs to that small class of cases which has been admitted and called traumatic, though its penetration itself is evidence of low tissue vitality—it would have happened nowhere else in the intestine.

I recognize as a hopeless task any endeavor to combat the surgical bias of Dr. Duff.

Dr. Potter, and by no means is he alone in his position, thinks it proper to use purgation or saline cathartics in the beginning of the inflammation, to empty

out the bowel. I have tried hard to learn, I have repeatedly asked, what injury can it do to lock up the intestinal tract? What substance offends? How does it offend? What results from its offending? All the answer I can get is the vague and ancient axiom about keeping open the primæ viæ on principle. If, gentlemen, you will do this, if you will but rest the appendix when first inflamed, if you will keep it still and keep still its contiguous intestines which by their peristalsis agitate and press upon it and drag it about, then you will no longer call my results in these cases phenomenal.

It has been objected also that calomel cannot reach the appendix, more especially when peristalsis has been abolished by the accompanying morphine. I reply that calomel reaches everywhere, including the appendix tissues. It makes the teeth fall out, if this is desired. It is constitutional, a general antiseptic as well as local germicide. We may be certain it reaches the appendix tissues through the circulation.

The percentum of cases for males and females which I have given is thought incorrect; Dr. Werder, I think, stating that they are about equal. In answer I refer you again to the work of Dr. Fowler where you will find that analysis of many hundred cases gives one in females for every four in males. This is a matter of importance, inasmuch as it forms the anatomical base upon which the pathology —the first step, the initial lesion, rests. That is to say the better vitality of the appendix tissues in the female because of the better, the additional, blood supply from a vessel in the appendiculoövarian ligament.

RECTAL feeding may be carried on by means of a mixture of two eggs, twenty grains of pepsin, ten grains of chloride of sodium, and six ounces of water. This mixture should be slightly warmed, thoroughly agitated, and then gently introduced into the bowels by means of a syringe. To facilitate the entrance of the fluid into the intestines it is well to put the patient in a position with the hips much elevated above the head, either the knee-chest position or with two or three pillows resting beneath the hips.—*Toledo Medical Compend.*

Chloral Hydrate in Labor.

Chloral hydrate, says Dr. John E. Gardner (*Lancet*) has a great effect in assisting dilatation of the os uteri and relaxing the rigidity of the perineum. No post-partum hemorrhage follows, nor is there any delay or difficulty in the expulsion of the placenta. The chloral, I think, might take the place of chloroform, if given in small repeated doses during the long and tedious labor of the primipara. It does not seem to diminish the expulsive power of the pains, as I have often noticed in chloroform cases. I submit that the chloral might be further tried in place of chloroform in primiparae in order to relieve the rigid perineum and so avoid having to use forceps. Chloroform, in my experience, is attended with a great tendency to post-partum hemorrhage, which I have never seen after the use of chloral in labor. For many years I have from time to time experienced its boon to the poor, worn out and anxious mother, despondent with fear. After a dose of the chloral the frenzy passes off, and the patient settles down to her travail, which has a happy and speedy result.

Malarial Pseudo-Tuberculosis.

Charles Duba (*Brit. Med. Jour.*) describes this condition as not infrequent in malarial countries. It attacks persons who for some considerable period have been affected with ague, and begins with marked weakness, depression, loss of appetite, and emaciation. A dry hacking cough, together with dyspnea and irregular temperature, especially towards night, supervenes. Hemoptysis sometimes occurs. Physical examination of the sputa, however, does not show evidenc of special consolidation. Examination of the sputa, however, does not show the presence of tubercle bacilli. The cases recover under the influence of quinine and arsenic, provided the cachezia be not too advanced. The explanation of this condition, which may so easily be mistaken for tuberculosis, seems to be that a local pneumonic process is started at the apices by an accumulation of pigments in the circulating blood.

THE Monobromate of camphor thoroughly trituated with sugar of milk is a specific in small doses for all disorders of childhood caused by reflex nervous irritation, especially those of detention.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

for December. Beverly Robinson, M.D., Clinical Professor of Medicine at the Bellevue Hospital Medical College, N. Y., contributes a paper entitled

A Contribution to the Treatment of Organic Disease of the Heart.

One of the facts that is most prominent in the author's estimate of organic affections of the heart is that which shows the little need at times, of treating heart disease merely because a murmur is present. If accompanying the murmur there be rational symptoms of cardiac incompetency, such as pain, dyspnœa, palpitations, and if to these be added hypertrophy or dilatation, there can be no question that properly instituted medication may be of great service and relieve all distress for a while. In administering drugs we must recognize, however, that we give them for the purpose of relieving symptoms or diminishing the complicating conditions, not to cure the chronic valvular disease; once the latter is well established it is there to remain, and our effort should be not to cure, but to prevent it from becoming really injurious by reason of its possible effects.

Perfect compensation in chronic disease is what we wish and seek to attain when it is broken. When it is present no treatment is required.

In rheumatism the most common cause of chronic valvular disease, the author's treatment is an alkaline one, sometimes by means of bicarbonate of soda and Rochelle salts in moderate, frequently-repeated doses, sometimes with acetate or potash and chloride of ammonium. Either of these combinations seem to him preferable to the use of salicylates in neutralizing the bad effects of acute rheumatism. He has occasionally been of the opinion that the duration of the disease in its acute form was thus lessened and he is confident that the pain is frequently diminished in a marked degree. In a few cases where the temperature was high, the pulse bounding, he has used the addition of small doses of aconite to the second mixture for a few days with apparent good effects

Rest in bed in acute endocarditis is all important so as to reduce as far as possible cardiac activity. And not only is this confinement to bed essential during the febrile stage of endocarditis, but it should be kept up for many days after this is over, and when the rheumatic pains are no longer very pronounced. Even after the patient sits up particular attention should be paid to him, and so soon as he shows signs of fatigue he must immediately return to bed.

As regards the dietary in chronic valvular disease, we must insist upon what is wholesome, viz., roast and broiled meats, no rich sauces, condiments or made dishes. The ordinary fresh vegetables may be allowed, avoiding as far as possible those that are canned. Potatoes are often injurious, as they produce flatus and are difficult of digestion. Alcohol is bad in anything but a limited amount. It may be given in moderation at meal time to stimulate appetite or promote digestion; more than this will probably occasion gastric catarrh, which is decidedly prejudicial by injuring the powers of digestion. Tobacco should be avoided, as a rule, as it is so apt to render the heart irritable and produce palpitation and cardiac distress Very rarely in the author's experience has it been evidently useful. Tea and coffee are also to be taken in small quantities and not too often. After dinner coffee or tea should not be taken as they often disturb a night's rest, and thus bring on a condition of bodily discomfort which is in no wise compensated for by the temporary exhileration which is felt after their use.

Constipation must be attended to; and even though the bowels move regularly an occasional purgative dose will help relieve the first appearance of congestion of the different internal organs in an effective manner.

Of those remedies which stimulate the heart's action digitalis easily ranks first, and must be given without regard to the nature of the lesion whenever the heart begins to fail and is unrelieved by hygienic measures. Strychnia may be combined with the digitalis and, if there be any chronic lung affection as cirrhosis or emphysema, carbonate of ammonia. As a rule digitalis should be intermitted from time to time in order to obtain the best results. While the author does not believe in the idea that digitalis may lie dormant in the system to suddenly become active and produce poisoning, yet if its bad effects are once produced it is often difficult to again obtain tolerance of the drug. In the latter stages of mitral regurgitation when dropsy has set in, the action of digitalis is less satisfactory on account of the contraction of the arterioles produced, because this effect militates against its diuretic action. In order to obviate as far as possible this untoward action of digitalis, it should be given concomitantly with moderate doses of nitroglycerin. The author's plan is to give one dram of the infusion of digitalis and $\frac{1}{200}$ grain of nitro-glycerin every two hours, and progressively increase both of them if need be up to two or three drams of the infusion of digitalis every two hours, and $\frac{1}{50}$ grain or even more of the nitro-glycerin at similar intervals. If the digitalis apparently causes nausea or vomiting, if the pulse under its influence, instead of becoming stronger and more regular, becomes weaker, intermittent, and very slow, it is time to diminish or it may interrupt its use for several hours or

days. These indications are even more formal whenever the quantity of urine remains the same and its density is unaltered. As regards the nitro-glycerin, if the head throbs and pains in a notable manner, whilst the pulse remains small, feeble and uncertain, to increase its dose would be to question utility. The author prefers a freshly prepared solution of nitro-glycerin to the tablets which he thinks are often unreliable.

The author regards the action of the hydragogue purgatives as very important in relieving dropsy, and particularly in those cases where digitalis in moderate doses and by itself has not notably increased the bulk of the urine. Compound jalap powder, with or without calomel, is the preparation which he considers the most reliable among the purgatives, while elaterium and croton oil are not desirable if they can be avoided, or if the compound jalap or scammony powders prove active and beneficial. In these instances the author believes that it is important that no solid food should be given and that the diet should be a strictly fluid one and even the amount of fluid be limited. Of course the severity in regard to fluids should only last while the dropsical condition is very threatening. It is especially important whenever the serous cavity contains fluid, either the chest or abdomen, to let it out by paracentesis, or otherwise the patient's chances of even temporary recovery are greatly diminished.

In those cases of incompetency of the tricuspid valves with engorgement of the right heart, we have one other means of relief, namely, blood letting. It will not answer in an advanced state of incompetency to do more than afford relief in this way. If we attempt it we are apt to weaken the patient too much, and the heart soon ceases to contract altogether and stops in diastole. This indication for the relief of the right heart by venesection in acute dilatation is not changed by the fact that there may be old bronchial inflammation with emphysema; on the contrary it is just such cases that this means may be most potent for saving life, and all other means without it appears at times to be insufficient or unavailing.

The author is a firm believer in the efficacy of caffine in heart disease. In his judgment it is especially adapted to certain cases of mitral stenosis in which dyspnœa is excessive and where digitalis does not seem to act well. It is also very desirable to make use of citrate of caffiene in combination with strychnine in cases of aortic incompetence which do not respond favorably to the action of digitalis. Whenever the powers of assimilation are very imperfect, the salicylate or benzoate of caffiene may be employed hypodermically by reason of their perfect solubility and their non-irritant local effects. The author has also used convallaria for many years with good results.

He is opposed to the use of aconite in mitral stenosis and believes that a far better plan of action is to use repeated doses of nitroglycerine in all urgent cases and whenever the patient has been unrelieved by caffiene and convallaria, and afterward to follow up the use of nitroglycerine by the long continued use of strychnine or nux vomica. Even with children, the cases where the author considers the use of aconite of benefit, are rare and unless the child has fever with the intra-cardiac condition, which is apparently of ephemeral nature and without evident localization, he is loath to give aconite except in very small doses.

In certain cases of cardiac hypertrophy with or independent of a valvular lesion, aconite has been given with apparent benefit by some to quiet the throbbing and pulsation in the chest, apparently indicative of excessive heart action. In these cases he prefers the bromides, and regards the bromide of sodium as the least harmful of the group. What is true of the bromides is also true of the valerianates—and valerianate of amonia in pill form the writer regards as a most useful adjunct to our treatment of these cases.

In cardiac hypertrophy, when the tension is diminished by reason of the failure or rupture of one of the coronary cusps, we have tumultuous intra-thoracic throbbings, but they show weakness and not strength and should be treated with heart tonic like strychnia and iron.

Belladonna, the writer thinks, is often forgotten as to its beneficial action whenever neurosal difficulty is present in any condition of heart depression, without regard to the precise organic disease which prevails. In combination with iodide of potassium it certainly gives marked relief in many cases of aortic diseases in which part, at least, of the pain is apparently connected with a lack of synchronous rhythmic contractions between the two sides of the heart, connected with an insufficient or a badly co-ordinated nervous control. Possibly its stimulating effect upon the nervous centers controlling respiration may have also great value in the re-establishment of heart power and more perfect rhythmic action.

Electricity may also be of benefit in certain cases.

William T. Howard, Jr., M.D., Associate Professor of Pathology, Western Reserve University, Cleveland, Ohio, reports "A Case of Acute Ulcerative Endocarditis due to the Bacillus Diphtheriæ" This is the first reported case of endocardial lesion due to the bacillus diphtheriæ, and it is also the first time that this organism has been found associated with lesion of any of the internal organs other than the lungs; and for these reasons it must be regarded as a unique case.

John B. Roberts, A.M., M.D., of Philadelphia, in a paper entitled "Recent Experience with Tumors of the Liver," reports several cases.

M. Allen Starr, M.D., Professor of Nervous Diseases in the College of Physicians and Surgeons, New York, reports a case of Megalocephalic, or Leontiasis Ossea." The paper is illustrated with photographs of the patient in different stages of the disease. The author is of the opinion that the case reported is an instance of this disease, and that we can affirm that in these cases there is not only a hypertrophy of the bony tissue, but also of

the soft parts about it. It is probably that the diffuse thickening of the bones of the head and neck causes some pressure upon the nerves at their exits between the vertebræ and this might explain some of the symptoms which were present in the patient—especially the complaints of numbness and the difficulty in her gait. Various forms of treatment have been pursued in the case under consideration. A thorough trial of thyroid extract failed to affect the condition in any way, and did not cause any variation in temperature from normal. The use of arsenic and iron with strychnine, given in moderate doses, appears to have had some tonic effect, and these, together with the moderate use of corrosive sublimate internally, are the remedies relied upon. The author ventures to give the condition the name megalo-cephalic, because the term leontiasis has been applied to three entirely distinct conditions, and therefore leads to confusion.

THE ANNALS OF GYNÆCOLOGY AND PÆDIATRY

for November. Dr. Marcus Rosenwasser, of Cleveland, Ohio, contributes an article on

Abdominal Section in Intra-Pelvic Hæmorrhage.

The author advocates vigilant delay at absolute rest in circumscribed hæmorrhage, basing his plea on the fact that there is no immediate danger, and that active surgical interference is proper only for definite indications, or when vigilance and rest are not practicable. "Our ideal is early recognition and early operation—before the loss of blood has proved fatal, before dangerous adhesions have formed, before sepsis has set in, and while the operation is comparatively simple and safe. But when the case has continued for some time unrecognized, when a tumor has formed, and adhesions have become organized, the possibility of absorption is so great that it ought not to be disregarded. The operation, on the other hand, has become proportionately more difficult and dangerous, and ought not to be done except for cause." Appended to the paper is a table of ope cases.

A. H. Cordier, M.D., Lecturer on Abdominal Surgery, Kansas City Medical College, Kansas City, Mo., discusses the subject of

Hydrosalpinx.

The author does not believe that all cases of hydrosalpinx originate as a result of a suppurative disease of the tubes and the mild cases, those presenting few severe symptoms during their long periods of existence, and few adhesive bands and little injury to the ovaries, are cases that probably have their origin in a catarrhal salpingitis or a subinvolution of the tube following a septic "getting up" after a full term labor or a miscarriage. These cases are rarely diagnosed prior to operation, hence the fallacy of any one advising catheterization as a relief or cure.

G. S. Peck, consulting surgeon Youngstown City Hospital, Youngstown, Ohio, presents the "Report of Four Cases of Adpendicitis Surgically Treated in Thirty-seven Consecutive Hours." Out of the four cases there were two deaths.

Hugh H. Hamilton, M.D., of Harrisburg, Pa., describes "A Clamp for the Obstetric Forceps."

The editorial in this month's issue is concerned with Dr. Viquerat's treatment of tuberculosis.

In the Department of Pædiatry there appears a paper by Charles Greene Cumston, M.D., on "The Treatment of Whooping Cough, with Special Reference to Antipyrine." While the author does not regard the drug as a specific in this disease, he believes that it is of very great service in the treatment.

JOURNAL OF NERVOUS AND MENTAL DISEASES.

Dr. Henry R. Stedman writes of the

Management of Convalescence of the Insane.

The patients suffering from insanity are too much neglected, he says, in the intervals between attacks and when recovering from an attack of mania or some other form of intermittent insanity.

If patients in families predisposed to insanity were given the same careful attention and instruction they would receive if threatened with phthisis, they would benefit accordingly.

Of course one impediment in this course is the attitude of patients and their relations in giving as little prominence to symptoms of nervous derangement as they possibly can manage. Consequently an ailment rarely sees a patient until he has either had an attack of some form of insanity or at least has shown for some time decided eccentricity.

During an attack of melancholia, or of mania, we can only minister to the comfort of a patient and prevent him from injuring himself or others, but the management, during the time when he is slowly returning to his normal state, may determine the question of a second attack, or at least the length of time he will be free from one.

Sudden recovery from these disorders is the exception, and a very good means of determining their progress is by observing the character of sleep. Many cases will appear more rational during the day, but will continue to sleep no more soundly than before such seeming improvement began, and in such instances the improvement will show itself deceptive.

Among the symptoms of returning health are: "Improvement in sleep, general health, composure and interest, recognition of former delusions as such, mental improvement keeping pace with physical gain, return of menses, etc." To the mind of the author there is no surer sign though than "the cessation of decided fear of a return of the attack and of the patients' mortification at the supposed stigma which the attack has cast on them." The recurrence of symptoms of which the patient complained when sane, but which were lost during the attack of insanity, nervous headache, indigestion, back-

ache, etc., is another favorable sign. These symptoms usually recur in the inverse order to that observed previously. Backward steps —so great often as to stimulate relapse—may be expected, as an uninterrupted improvement is rather rare.

Patients and their friends frequently wish to stimulate the mind of a convalescent by light study, etc., but this is distinctly injurious in all cases where, as in mania, the mind has been in a state of unnatural excitement.

Piano playing and similar work requiring the minute attention for some time, is particularly to be avoided, even in cases of melancholia the effort to stimulate a patient's thoughts should not be continued when it becomes irksome to him. The necessity of absolute quiet and rest at the menstrual periods is mentioned because it is so often neglected.

In convalescence from acute mania, general paralysis of the insane, and from melancholia with any trace of suicidal tendency, the removal from the asylum should be postponed as long as possible, and change of any kind will prove ultimately injurious, though it often appears for a time to be causing marked benefit. The contrary course to this is beneficial in cases of melancholia which develop homesickness, and in cases of mild mania which find asylum life irksome and full of irritating restrictions.

The author goes further, and noting the general absence in this country of any convalescent homes for patients who have suffered from mental diseases, describes some steps which have been taken in Europe to meet this necessity. In France and Switzerland societies have been formed to furnish those discharged from insane asylums with money, tools, clothes, etc., and to supervise them to a certain extent in obtaining employment for them, and by investing any money they may save to as great advantage as possible.

In this issue is also a paper by Dr. Charles L. Dana on "The Localization of Sensations, etc."

IN THE PRACTITIONER

for December, the former editors Drs. T. Lander Brunton, Donald MacAlister and J. Mitchell Bruce announce their retirement in favor of Mr. Malcolm Morris.

Dr. Henry Ashby writes

"In the Ætiology of the So-Called Scurvy Rickets."

The author is unwilling to fully accept the current view that the anæmic condition seen in some cases of rickets is solely due to improper feeding, his own view being that in the cases which seem to be scurvy there is an increase of the anæmia which is always present in rickets. In the severe forms of several diseases, such as hereditary syphilis, a tendency to bleed from the mucous membranes, with very slight provocation is well recognized, and there seems to be no more excuse for the term "scurvy-syphilis" than "scurvy-rickets."

Criticizing the view often advanced that it is the absence of fresh vegetables, only, that leads to scurvy the fact is dwelt on that vegetables are absent from the diet of every child for the first year or two. Again, far from thinking that the children of poor parents escape this disease by picking miscellaneous scraps from the table, it seems more probable that those who live long enough to acquire this habit are hardy by nature, and that the weaker ones die of some disease of earlier manifestation. The weak children of wealthy parents, on the contrary avoid death for some time by reason of the great care they receive.

In the cases seen by the author he could always get a history of aggravated dyspepsia and its sequels. No case had up to the time of the onset of the disease been exclusively breast fed, and several had received food which would class with the antiscorbutics.

With the exception of breast milk the continued exclusive use of any food proves injurious and this is especially so if the supply of digestible fat is scanty. Milk, cream, whey, fresh beef juice, orange juice and cod-liver oil give the best results. Perhaps of even greater importance than a well selected dietary is plenty of sunlight and of fresh air.

Dr. James B. Ball has an article on

Chronic Lacunar Tonsillitis,

And recommends the use of a small hook-bladed knife to unite contiguous follicles and thereby encourage them to eject their contents.

The follicles are frequently found partially bridged by the swollen tissue, and the secretion confined in them by this. If a small knife, with a blunt pointed, hook-shaped blade, be inserted in one of these crypts, a slight motion will slip the tip into any communicating follicle and a slight pull will divide the intervening tissue. Several of these should be opened in this way, and to prevent rapid healing the writer then paints a solution of ninety grains each of iodine and iodide of potassium in an ounce of water over the surface.

If the tonsils are large enough and project enough they may be excised, but they are rarely of the proper shape.

Emptying the crypts and applying caustic without incision does not prove so satisfactory as this method.

Dr. Robert Turner gives some

Practical Points in Treatment of Venereal Diseases.

Cases of gonorrhœa seen early are given one-grain pills of aloin to cause purgation and lessen the likelihood of chordee and synovitis.

The abortive action of strong solutions of nitrate of silver is not acknowledged, and the writer uses instead one grain of morphine in an ounce of dilute nitrate of mercury ointment, applying the same three times daily to the anterior urethra by a match-stick wound with a small piece of absorbent cotton.

For epididymitis the application of leeches is followed by the free use of belladonna ointment and seems to give satisfaction.

Many of the cases seen were sailors and some of these had syphilis complicated with malaria. In such cases arsenic was preferable to quinine.

Men who had been to the African coast frequently presented phagedænic ulcers of the glans. These appeared early, were not syphilitic, healed promptly when dusted with zinc oxide and calomel, but they showed very plainly a phagadænic tendency and always left some deformity.

Dr. F. Ortan has a paper on

"Indigestion,"

using the case of a patient of his as the basis of his article.

This patient had become impressed with the idea that he had dyspepsia, and had by brooding over his condition and by the continual use of medicines lost in weight and spirits. The author recommended a free mixed diet of food chosen at will, and had the pleasure of seeing his patient resume his former healthy appearance. This sort of advice the writer thinks would cure most such cases and he goes to the extent of declaring that there is no such disease. He qualifies his statement, however, by saying that the various symptoms usually recognized as belonging to indigestion are those of a purely neurotic condition, and should be treated without consideration of the stomach.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

The Etiology of Pain in the Back.

Dr. S. Erben says (*Wiener med. Presse*): Pain in the back may be due to many different conditions. Other symptoms are to be sought. The eruption of herpes zoster, spondylitis, pyrexia (suggestive of infectious diseases or visceral inflammation). Examination of the abdominal and thoracic organs is necessary to detect a beginning pneumonia, pleuritis, pneumothorax, or tuberculosis. Interscapular pain, with dysphagia, might indicate mediastinal tumor, such as esophageal cancer, or an aneurism. Affections of the stomach, bowels, liver, and spleen, give pain usually confined to that part of the back between the fifth and ninth dorsal vertebræ. Constipation often causes dorso-intercostal neuralgia, gastric catarrh, ulcer, cancer, or atony, may cause severe dorsal pain. The genito-urinary tracts, especially in women, very often produce back ache. General conditions, such as anemia, chlorosis, spinal diseases, especially meningitis, of the dura mater, or the pia and tabes dorsalis, hysteria, and traumatism are also to be considered. All these being excluded, neuralgia or rheumatism is the sole condition.

An Epidemic of Vulvitis Occasioned by a Thermometer.

MM. Weill and Bergeon, of Lyons, have observed, in a hospital ward under their care, an epidemic of vulvitis occuring among young girls. There was nothing to explain its origin, for it was scattered irregularly among occupants of various beds. The mode of its origin was, however, rendered clear by a fresh outbreak following the admission of a typhoid fever patient. The contagion was spread by means of a thermometer which the nurse was in the habit of introducing into the anus of patients. The temperature was taken before and after each bath,—*i. e.*, sixteen times,—and therefore the gonococcus was deposited sixteen times and became a powerful contaminating agent. The thermometer was simply plunged in water carbolized 25 to 1000. The reporters caused the instrument to be cleansed in a 33-per-cent. solution of hydrochloric acid and the epidemic was promptly arrested. Three months later there was a recurrence, as a new nurse began to take temperatures and again employed the old 25 to 1000 carbolized solution. Contamination was conveyed by the part of the thermometer in contact with the vulva. Inflammation of the anus was in no instance caused.—*La Medecine Moderne.*

NEUROLOGY.

Criminal Anthropology.

In a recent essay on this subject Professor Lombroso, of Turin, describes what he terms the "criminal type." The features characteristic of this type are found in the faces of most regicides and assassins of presidents, notably Fieschi, Guiteau and Nobiling. To this type belong also the promoters and leaders of reigns of terrors, such as Carrier, Jourdan and Marat. Among noted anarchists he describes the bomb thrower, Ravachol. Lombroso says: "What first forcibly impresses the beholder of Ravachol's face is its bestiality. Its asymmetry is strongly marked; the nose deviates greatly to the right, the ears are implanted on the head at different heights, and the lower jaw is heavy, square and prognathic." In speaking of Ravachol's history, he says: "The pupil of a primary school until the age of fifteen, Ravachol left it almost absolutely illiterate. Designed by his parents for a simply mechanical trade, he abandoned his apprenticeship, because unable or unwilling to acquire

even its rudiments. He became a hopeless idler, committed thefts and circulated counterfeit money. He disinterred a corpse and robbed it of its jewels. He murdered an old hermit of eighty-four years, in order to steal his money. At about the same time, he attempted to kill his mother for a fancied offense. It was established during Ravachol's trial that his grandfather, Koenigstein, and his great-grandfather both perished on the scaffold, convicted of murder and arson. —*Alienist and Neurologist.*

OBSTETRICS.

The Treatment of Threatened Abortion.

In cases of unavoidable abortion, Dr. C. Marocco, an instructor in gynecology in the medical department of the University of Rome, (*Semaine Medicale*), advises tamponning the vagina with gauze moistened with glycerine, and the internal administration of the following prescription:

Phenacetine	o	30
Morphin hydrochlorat	o	01
Sacchari	q. s.	

This is to be administered in wafers every hour until three doses have been taken. Under this treatment the abortion is terminated almost without pain and within a period not exceeding twenty-four hours.

SKIN DISEASES.

Losophan in Ringworm of the Head.

Professor Ohmann-Dumesnil (*Quarterly Atlas of Dermatology*), writes as follows regarding the treatment of ringworm of the head:—"The treatment of ringworm of the scalp is far from being an easy matter so far as procuring a successful result is concerned. It is absolutely necessary to prepare the affected locality for the purpose of applying the proper remedial agents in a thorough and adequate manner. The hair of the head should first be clipped short. This being done, a good and thorough shampoo with sapo viridis is to be ordered, so as to cleanse the scalp as thoroughly as possible and, at the same time, dissolve all superficial portions of the parasite which may be lurking about. The next thing to do is to apply a good antiseptic solution, and for this purpose a one to five hundred bichloride solution, or some similar preparation will prove adequate. This having been done, the next thing in order is to epilate. Whilst epilation should be thorough, the least that is to be done is to epilate a half inch of the apparently healthy scalp surrounding a diseased patch. This effectually isolates the healthy from the diseased parts and prevents a further extension of the process.

This having been properly done, an application is to be rubbed in, whose purpose it is to destroy the sores and permit of a growth of healthy hair. There are many remedies suggested, but among the best is Losophan, combined as follows:

Losophan	2 drams
Axungiæ	2 ounces

M.

This should be thoroughly rubbed into the patch twice daily and continued for quite some time. Its persistent application will be rewarded by a good result in a comparatively short space of time."

Warts.

Professor Kaposi, in multiple warts of the face, employs the following:

Sulphur	grs. xx
Glycerin	grs. l
Pure con. acetic acid	grs. x

Apply locally to each wart.

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM JANUARY 18, 1895, TO JANUARY 26, 1895.

Colonel Joseph R. Smith, Assistant Surgeon General, will be relieved from duty as Medical Director, Department of the East, to take effect about February 5, 1895, and will proceed to his home where he is authorized to await retirement.

Leave of absence for twenty-one days to take effect upon being relieved from duty at Fort Warren, Massachusetts, is grauted Captain Edward R. Morris, Assistant Surgeon.

First Lieutenant Ashton B. Heyl, Assistant Surgeon, is relieved from duty at Columbus Barracks, Ohio, and ordered to Fort Thomas, Kentucky, for duty.

Major John V. Lauderdale, Surgeon, will be relieved from duty in the Department of the East, to take effect upon the expiration of his present leave of absence, and will then report for duty at Fort Omaha, Nebraska.

Lieutenant Colonel Henry R. Tilton, Deputy Surgeon General, is relieved from duty at Fort Omaha, Nebraska, and will report in person to the Commanding General Department of Dakota for duty as Medical Director of that Department. Colonel Byrne on being thus relieved, will report to the Commanding General Department of the East for duty as Medical Director of that Department.

NEWS AND MISCELLANY.

The Society for the Relief of Widows and Orphans of Medical Men of New Jersey, was incorporated in 1882 and has continued to grow both in influence and membership.

Since its organization 241 physicians of the State have become members; of which number 32 have died, 28 been dropped for various reasons, leaving at the present time 191 active members.

The Permanent Fund amounts to $1338.42, and it is intended eventually to allow small annuities to widows and minor children in cases of need.

The amount already paid to the families of deceased members amounts to $2478.00.

The total cost of running the society during the past year was $19.67.

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ORIGINAL ARTICLES.

IMPORTANCE OF SURGICAL TREATMENT IN CHRONIC PURULENT OTITIS MEDIA.

GILBERT E. SEAMAN, M.D., MILWAUKEE, WIS.

It is not to go into detail in regard to the surgical treatment of chronic purulent otitis media, but rather to urge the importance of recognizing the necessity of such treatment when it exists, and point out briefly the dangerous sequelæ which are sooner or later liable to arise, and when we take into consideration the comparative frequency of these sequelæ, the successful treatment of the condition becomes a matter of prime importance.

St. John Roosa[1] says: "The almost inevitable consequences of the suppuration of the middle ear are dangerous to life and health of patients, hence the importance of the subject and the interest which every physician should take in arresting the advance of the disease."

It is almost an every day occurrence for the aurist to come in contact with patients suffering from a chronic purulent discharge from the ear, which has continued months or years, who inform him that they have been told by physicians that they need no treatment further than the routine injection of antiseptic solutions, or the insufflation of some antiseptic powder; or, perhaps, they have been advised that they will "outgrow" the trouble. Such advice is, as a rule, misleading, inasmuch as it engenders a false feeling of security which should not exist where there is a persistent purulent discharge from the ear. These cases may be divided into two classes as regards effects of routine treatment: 1st. Those cases which respond readily. 2d. Those which respond indifferently or not at all. It is with this latter class that we are specially concerned.

In a majority of these cases a careful examination will reveal the fact that there exists more or less necrotic tissue, such as dead bone, granulations, etc., or polypi, exostoses, and other products of inflammation; and when the disease has involved the deeper structures there are accumulations of effete material, the result of long continued inflammation, which the ordinary measures will not reach, and our efforts will prove of no avail unless we provide for free drainage. We must recognize and carry out the fundamental principles of surgery here as elsewhere. In those cases of suppurative otitis lasting over several months, there is nearly always present a condition which calls for surgical interference, and such surgical interference should be unhesitatingly resorted to as the only rational method of treatment. Otologists have quite generally recognized these facts within recent

years, but if one can judge from the number of cases of persistent otitis media of years standing, still "making the rounds," it is reasonable to conclude that there is still too much timidity in this regard, especially on the part of the general practitioner.

These cases, with very few exceptions, may be permanently relieved by removing the offending necrotic elements, granulations, polypi or other products of the disease, and such other obstructions to free drainage as may exist. This can generally be accomplished through the external meatus, but occasionally it may be necessary to resect the parts posterior to the meatus or open up the mastoid cells, establishing drainage through the ear.

These proceedings are comparatively simple, and when done with proper precautions are reasonably free from danger. But the anatomical relations and structure of the parts must be borne in mind, as the walls of both the middle ear and mastoid cavities are naturally thin, and when weakened by disease one might, with the smallest amount of undue force, enter the lateral sinus, labyrinth or brain cavity. The hemorrhage as a rule is of little consequence. In operating on the middle ear there is some danger of wounding the facial nerve, as it passes through the Fallopian canal. I may state, in this connection, that I have recently seen a case of facial paralysis produced in this way, in the practice of Dr. Bach. It did not appear until twenty-four hours after the operation, but the doctor was of the opinion that it was due to irritation at the time of the operation and a consequent congestion. The paralysis in this case responded readily to treatment by electricity, and was entirely gone in a few weeks. The results, however, are not always so favorable as this. Victor Horsley, Keen and others, state that the proximity of the nerve may be ascertained by the twitching of the facial muscles when an instrument comes in contact with its trunk. But I think the safer method is to locate the Fallopian canal and then control all hemorrhage so that it may be kept in view.

In cases of suppuration of the middle ear of long standing, the ossicles are frequently entirely destroyed, and after removal of remnants of the membrane, a thorough and careful use of the curette especially devised for this purpose, followed by appropriate after-treatment, is all that is necessary to affect a cure of the suppuration at least. The membrane should be thoroughly removed; not merely incised, but excised close to its attachment, especially at the lower part, so as to prevent lodgment of accumulations behind the membrane, and thus obstruct drainage.

Excision of ossicles. When there is only partial caries and ankylosis of ossicles it may be necessary to excise them. I will not go into detail in regard to this operation, but suffice it to say that it is by no means an easy matter. General anesthesia is not always necessary and many operators use a strong solution of cocaine instead, with success. The published reports of excision of the ossicles are decidedly favorable and where other methods are insufficient, it offers very encouraging hope. In regard to results, Burnett[7] formulates the following conclusions:

1. "This operation has not failed to stop suppuration in all cases of purulent otitis media in which the author has applied it.

2. "In 'attic' cases with normal atrium, the sole perforation being in the membrana flaccida, this operation is the only means of cure.

3. "By this operation, in cases in which the sole perforation is in the membrana tensa and is comparatively small, and while the purulency is limited to the anterior part of the drum cavity, the suppuration is checked before it reaches the drum cavity and mastoid disease, sinus thrombosis, and cerebral abscess are prevented.

4. "If any hearing exists before the operation it invariably improves after the operation.

5. "Vertigo, headache, tinnitus, and the ordinary attacks of acute inflammation, so common in chronic otorrhœa are entirely removed by the excision of the necrotic remnants of the membrana, malleus and incus."

Milligan[8] lately reported fifteen cases operated, with eleven cures; two improved and two still under treatment. Of the thirteen cases discharged, hearing was improved in eight, same in three, and worse in two. Milligan concludes that

in suppurative otitis with perforation of the membrane and caries of ossicles, local treatment has failed. That by excision of the ossicles all the symptoms are usually benefited and rarely made worse.

In the discussion of the paper the general opinion seemed to be in line with the ideas expressed by Milligan.

Many other operators, both here and abroad, report cases with a percentage of cures of the suppuration ranging from 75 to 85 per cent., with marked relief of the other symptoms and a decided increase in the power of hearing as a rule.

Before taking up the consideration of sequelæ, I might mention briefly the operation for the relief of this condition first suggested by Stacke,[4] of Erfurt, in 1890. He claims that the operation is particularly indicated where there is disease of the attic, and that, as a rule, the temporal antrum is involved in these cases.

Stacke makes an incision down to the bone, following the insertion of the auricle, excises the posterior wall of the meatus and clinches through the mastoid until the antrum is reached. He then removes the remains of the ossicles, membrane, whatever *débris* there may be present, making the attic and lower part of tympanum to form one cavity, and securing a free opening between the meatus and antrum, which is covered by a flap of skin and periosteum from the meatus. This is a difficult and formidable operation—practically a mastoid operation—and it does not seem to be justifiable or necessary in uncomplicated cases. The statistics of the operation as regards cure of suppuration and increase of hearing, certainly do not bear out the claims made for it

Sequelæ.—Among the most common consequences of middle ear disease are accumulations of masses of *débris* consisting of degenerated epithelium, fatty matter, etc., the so-called *cholesteatoma*, or pearly tumor. Virchow[5] says that nearly one-third of all fatal cases are due to these accumulations. On examination of an ear containing cholesteatoma, a yellow, hard mass will be seen, probably quite filling the middle ear, the odor is very offensive and the ear exceedingly painful. These masses can generally be softened up and removed by syringing, if they are situated where they can be reached by such measures. But if located deep in the middle ear, or impacted in the mastoid cells it is, of course, necessary to resort to surgical interference, either the use of the curette or opening of the mastoid. Cholesteatoma are very liable to recur.

Exostoses, excepting congenital, are with few exceptions due to middle ear suppuration. They can generally be removed with the curette, but occasionally are dense and require the use of the chisel, or the dental engine and burr, as first suggested by Mathewson.

Mastoid disease, periostitis and caries with pus formation more frequently results from purulent otitis media than from any other cause. In a summary of fifty-nine cases reported by Roosa,[6] twenty-five were due to this trouble. The statistics of various authors I have at hand, place the proportion of mastoid cases due to ear disease at from one-third to one-half, and when we take into consideration the close relationship of the middle ear and mastoid, it is easy to understand how extension of inflammation from one to the other takes place.

It is not always an easy matter to differentiate between periostitis and caries of the mastoid, as frequently the symptoms are very similar. Frequently however, in suppuration of mastoid, the ordinary symptoms of periostitis-redness, swelling, etc., are absent, and excessive pain in the ear, with perhaps a decrease in the discharge, and rise of temperature are the only indications. Where these symptoms exist, no time should be lost in applying surgical treatment.

Necrosis of temporal bone, more or less extensive, not infrequently occurs as a consequence of this disease, and there are a number of cases on record where nearly all of the bony structures of the internal ear have become carious and been extracted as sequestra during the life of the patients. This is one of the most fatal complications and the symptoms vary widely, according to the parts involved. The canal in which runs the facial nerve may be included in the necrosis, or there may be engorgement of the nerve during the acute exacerbation and facial paralysis complicate the condition. The prognosis of the paralysis, however, is generally good. The treatment in addition to the application of general principles must necessarily be largely expectant, removing the sequestrum when it is possible.

Meningitis is a comparatively frequent and very fatal complication, especially in young children. It is, as a rule, secondary to other complications, such as cerebral and mastoid abscess, etc. Meningitis may be produced by entrance of morbid material into the circulation or by extension of inflammation from the bone to the dura and meninges. The symptoms do not differ materially from those of meningitis due to other causes. It seems to be the general opinion that surgical treatment is of little use in these cases. Pitt, quoted by Burnett,[7] says a fatal termination will be more frequently prevented "when it is recognized that it is desirable to operate sooner than we have hitherto done in those cases of ear disease in which there are severe local symptoms."

Cerebral abscess, extradural, subdural, and abscess of brain substance proper, more frequently result from middle-ear suppuration than from any other cause. According to good authority fifty per cent. of all cases arise in this way. It is not necessaay for caries of bone to exist in order that abscess may be developed. The purulency may involve the internal ear and, by extension along the membranes, cause a septic inflammation and result in the formation of abscess. The symptoms of abscess generally follow cessation of the discharge, and are severe headache, either general or local, due to pressure, slowness of pulse and respiration, vomiting, sluggishness of the mental faculties and other symptoms according to the location of the abscess. There is generally a rise of temperature, but if the abscess be extradural or subdural, it is frequently normal or subnormal. As the greater number of abscesses from ear disease are situated in the tempero-sphenoidal lobe, symptoms of pressure in this region, such as motor aphasia and paralysis of the face and extremities, will frequently appear. Owing largely to recent advances in the matter of cerebral localization, the indications for surgical interference are now clearer and while the results are not all that could be desired, they are very encouraging.

Thrombosis of the lateral sinus and phlebitis are occasionally met with and often give rise by metastasis to septic pleurisy or abscess of the lung. The symptoms of thrombosis are rigor, pyrexia, tenderness behind the mastoid, pain in the occiput and neck, and if the clot has extended along the jugular vein there will probably be tendernsss and inflammatory thickening in the region of the vein and carotid artery. The discharge from the ear will have ceased in the majority of cases. This condition was formerly considered to be an extremely fatal complication. But within the past few years it has been more frequently recognized as it occurred, and the results of ligating the internal jugular, as first suggested by Zanfel, in 1889, have been satisfactory. The best statistics I have been able to find are those of Lane.[8] He lays open the sinus, ligates the jugular below any thrombus encountered, and irrigates the septic surfaces. Lane[8] reports ten cases with nine recoveries. In a series of thirty-two cases gathered from various sources by Keen,[9] nineteen recovered and thirteen died after this operation. And Dr. Macewan in his recent textbook, mentions twenty cases operated, with sixteen recoveries. Thus it will be seen that the results of operation in this condition are decidedly favorable.

Malignant sarcoma, carcinoma and tuberculosis are said to be among the rarer complications of purulent otitis media.

I present this paper with the hope that it will serve to impress more firmly the necessity for surgical procedure in chronic suppuration of the middle ear. In regard to temporizing with this condition Keen has to say: "A case may go on for fifteen or twenty years, but the day of reckoning may at last come. and when it does come, it comes like a whirlwind."

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Chrysarobin Pencil.

Leistikow:

Chrysarobin	gm 30
Rosin	gm 5
Yellow wax	gm 35
Olive oil	gm 30

S. In alopecia rub the above into the hairy scalp at night. The irritation may be met with zinc ointment.

—*Nouveaux Remedies.*

INTESTINAL OBSTRUCTION; DOUBLE HAIR LIP; GASTROSTOMY TUBE; HEPATIC ABSCESS.*

ROSWELL PARK, A.M., M.D., BUFFALO.

Friday night after dinner, a man aged forty-eight, was seized with severe, rather indefinite, abdominal pains which suggested appendix inflammation. Once or twice before he had similar attacks but not quite so severe. He had to go to bed on account of the pains. An injection was given, as there had been no action of the bowels, anodynes also, and the man grew no worse till Monday afternoon, when he had fæcal vomiting, and the same night he vomited half an ordinary chamberful of fæcal matter. Tuesday morning I saw him with the medical attendants. At that time he had not vomited since the night previous, his pulse was good and full. There was much rumbling and peristaltic action of the bowel as the result of large injections, but the bowels had not moved. I suggested a more powerful enema of a saturated solution of magnesium sulphate, and at the same time advised that if there was any return of the fæcal vomiting the patient should be brought to the hospital and operated on at once. At six o'clock that night I operated, making the opening in the middle line. While exploring the intestine, running my finger along its coils, all of a sudden something gave way before my finger on the right side of the abdomen and there was a gush of exceedingly foul pus. This ran everywhere and some of it must have escaped into the abdominal cavity. I had not expected pus, yet I had proceeded with the greatest caution, using barely enough force to rupture the most delicate peritoneal adhesion. The intestine was at once removed, coil by coil, until the patient was nearly eviscerated. Finally I found a place where there had been a nest of adhesions shutting off a cavity between several loops of bowel, and in this pocket foul-smelling pus had collected. After disinfecting this with a hydrogen peroxide solution, I came upon two loops of bowel, one above the other, and both behind the abscess. These had been doubled up so that nothing could pass through them. Without much difficulty, I separated the adhesions which bound the intestinal kinks, once more disinfected the whole abdominal cavity, washed it out thoroughly with hot water and put in a drainage-tube. I put back the bowels and closed the external incision down to the tube. This morning the man's pulse is good, his temperature is 102° F., his general condition is as favorable as I could expect. The chances are naturally against recovery, yet I have some hope the man will get well.

Of the causes of intestinal obstruction, intussusception and volvulus are the most common; adhesions either freshly formed or old peritoneal bands not uncommonly obstruct the intestine but this case is a rare one. I presume this trouble began with some mechanical obstruction, then there was a little damage to the peritoneal coat, just enough to cause some exudation. But exudate causes adhesions and adhesions more obstruction to the bowel, and more exudate, so that the sequence runs in a vicious circle. The exudate undoubtedly became infected with the colon bacillus.

The case is highly interesting pathologically, rare clinically, and demanding relief surgically.

DOUBLE HARE LIP

This is a little boy who, they say is five days old. It would be insufficient to diagnose his case as a hare-lip. You will note that there is a complete fissure of the lip, projecting into the maxillary bones. The lip is represented in the middle by what the Germans call a *philtrum*, which projects like the snout of some animal. It is not merely a loose tag of soft tissue which can be readily approximated to the lateral portions of the lip, but it is connected to cartilage with centers of ossification. In order to get it back in line with the rest of the lip, I shall remove a

*A clinical lecture at the Buffalo General Hospital.

V-shaped piece of cartilage. My opinion is that, on account of the shock, which is always relatively greater in infants than in adults, it will be better to finish the restoration of the lip at a second sitting. At that time, the margins of the double cleft in the lip will be freshened and the parts united by the aid of a hare-lip pin.

This condition is not a perversion of growth along unnatural lines, but is the persistence of a tripartite arrangement which is normal in early foetal life and which usually coalesces later.

GASTROSTOMY TUBE.

This patient is a girl upon when I performed gastrostomy some weeks ago, on account of occlusion of the pharynx from congenital syphilis. At the time, the operation was necessary to keep the girl from starving. Of late, however, the relief of the pharynx from irritation and the action of drugs have cleared up the granulations in the throat so that she has taken food through the œsophagus and the fistula has closed. It is not at all certain that she will long be able to nourish herself by the natural passage as it is even now difficult for her to do so and, we have had a tube constructed to facilitate feeding through the fistula. The canula is a silver tube with a shield which can be set at any point by a screw. A rubber tube with attached funnel can be slipped over the metal tube, and the nourishment can then be poured in. It is easy to reopen the fistula and you can see that the stomach contents appear at once in the opening.

HEPATIC ABSCESS.

Some time ago you saw a case of abscess of the liver, which was opened and drained. The man was sent to his home in Pennsylvania with a drainage tube in place. The opening, however, does not now permit as free drainage as is necessary and I purpose enlarging it to day. There have probably been formed wide adhesions between the surface of the liver and abdominal wall, so that there is now little danger of opening into the abdominal cavity. It will probably be necessary to resect one or two ribs to follow the sinus to the bottom, and this can be done with cutting forceps. When I was a medical student, resection of a rib was a very unusual, even serious operation; it is now considered a simple procedure. There is no trouble to be feared providing you have control of your instruments and can maintain asepsis. Ordinarily it is necessary to keep out of the pleural and the peritoneal cavities by following the bone closely. The periosteum is intimately connected with the serous membranes, and both together should be stripped from the rib by an instrument having the proper curve to prevent it slipping through the soft parts. It is simply a question of dexterity to keep such an instrument always in contact with the bone. The other bug bear of rib resection was the intercostal artery, which runs in a grove in the under and inner aspect of the rib. But with aseptic methods, an artery running in a bony channel affords as much security as one could ask for. It is not necessary to ligate such a vessel, for one can easily plug the bony channel, or, in the case of a rib, all that is necessary is to crush the bone with strong-beaked forceps.

Typhoid Fever.

In the management of typhoid fever, Dr. Adolph Kœnig, of Pittsburg, Pa., has used with satisfaction, the following:

Guaiacol	} fl 3 ij.
Glycerini .....āā	
Alcoholis	fl 3 iv.

M. Sig.—Five drops in whiskey and water every two two hours.

—*Food.*

Treatment of Delirium Treamens.

In the *New York Med. Jour.* Bellamy concludes an article as follows:

1. Delirium was controlled with greater rapidity and safety by trional than by other hypnotics.

In the majority of cases a marked stimulant effect was observed, possibly on account of the methylic and ethylic elements which enter into the composition of the drug.

3. On account of the low temperature noted in all cases, trional must posess antipyretic properties, thereby simulating its allies of the phenol group.

4. It was always well borne by the stomach, and in one case was rapidly absorbed when administered per rectum.

5. No unpleasant after-effects were observed, and in all cases recovery was speedy, with the exception of two.

LEAD POISONING.*

PROFESSOR WANNEBROUCQ, LILLE, FRANCE.

Lead poisoning may take place under the various conditions, but it is most frequently of professional origin, at least in our portion of the country. Here, as you know, our white lead is prepared according to the Dutch method, and during the various processes of its manufacture much dust is produced which contains a great deal of the carbonate of this metal, and which, in the majority of cases, is the cause of the poisoning Absorption may take place in various ways, but more particularly by the digestive and respiratory tracts. Lead, when introduced into the system, acts especially upon the nervous system in its central as well as peripheric portions; but at the necropsies it is also found in other portions of the body and especially in the liver, the spleen and kidneys. It also has an action upon the blood by decreasing the number of red blood corpuscles even to one half, increasing those that remain in size and impoverishing the coloring matter.

Lead poisoning is observed, clinically, as various symptom complexes either isolated or associated, among which is most frequent that which, according to my ideas, is termed lead colic. This latter form is presented by two patients now under treatment in the hospital.

The first is that of a young man of twenty-nine years and a half, who is dirty, careless of his person, regardless of the least hygienic measures, addicted to alcohol and therefore particularly susceptible to the deleterious action of the metal. Scarcely fifteen days after his entering the workshop he experienced the first symptoms: lack of appetite, disgust of food, nausea, vomiting, constipation and general weakness, but it was only later when he noticed sharp pains in his abdomen that he decided to enter the hospital.

At the examination we found him pale, anemic, with a subicteric tinge of his conjunctivæ and skin. This peculiar color, which is especially noticed in lead poisoning, is not due to the coloring matter of the bile, bilirubine, for an analysis of the urine will not yield the characteristic reaction, but, on the contrary, it is the product of the destruction of the red blood corpuscles and the impregnation of the tissues by the hemoglobine and methemoglobine. His pulse is small and slow; if one take a sphygmographic tracing, one will remark that the ascending line is short and but little accentuated while the descending one is long and almost horizontal. His breath is foul, an other characteristic sign of this disease, due not only to a lack of proper care of teeth but also to exhalations of sulphuretted hydrogen from long retention of the feces in the intestines.

For several days he has suffered from violent abdominal pains, an actual colic, as he says. He has no appetite and vomits frequently. The vomited matter which is quite abundant, is composed of bile mixed with mucus. For the last eight days he has had no passage of the bowels and the different purgatives which he has taken while at the hospital, have been without effect. He has no fever; on the contrary, his temperature is slightly below normal.

These symptoms have directed us into the right path for a proper diagnosis, but if we continue our examination we shall find from the blue line along his gums and the nature of the pains, the characteristic signs of his disease. His teeth are covered with a thick coating of tartar and in this tartar near the gum we notice a small and blackish line, almost on the gums, and at the roots of the teeth. To be precise this line is not exactly black as it is but a slight and recent deposit of tartar, so that, seen by refraction, it has rather a violet color than a very pronounced dark. This line is not only situated upon the teeth but also upon the margin of the gum itself.[1] Some writers have asserted that it was due to small and capillary emboli in the vascular loops of the edge of the gum, but I rather think that this theory is not tenable and that it is simply dependent upon the introduc-

*A clinical lecture delivered at the Hospital Saint-Sauveur, Lille, France. Translated from Le Nord Medical, December 15, 1894, by F. H. Pritchard, M.D.

tion of minute particles of lead into the tartar and the gum which is transformed into the black sulphate of lead by the action of the sulphohydrate of ammonia, which is formed in the mouth. This sulphate penetrates, little by little, into the mucous membrane and becomes fixed as a sort of tatooing, aided by the mechanical action of the lips upon the roots of the teeth. We have a support to this theory in the second patient, for if one lift his upper lip you will notice a sort of tatooed line on the mucous membrane of his lip which corresponds to the portion which lies against the roots of his upper teeth. Whatever be the proper explanation of this characteristic, the line is present in our first patient, and forms a sign of great value in diagnosing lead poisoning.

We find a second in the analysis of his pretended colics of which he complains. You will observe that these pains are not situated in the abdominal region in all its extent, but that in this patient they are limited to the region of the two recti. If one press upon them at any point, the patient will complain of violent pain, yet in the immediate vicinity of these muscles nothing of the kind is noticed. One may press the abdomen inwards in any other region without giving rise to the slightest pain; on the contrary, we may raise a fold of skin and pinch it and no painful reaction follows. Therefore, the subjacent portion of the abdominal wall is the seat of the pain and not the intestine, for, at the sides we may press upon them with considerable force without pain. The pain is, indeed, in the muscle itself, of which we have a striking demonstration. If one press firmly upon the upper insertions of these muscles, on the costo-xiphoid ligament at the anterior portion of the fifth, sixth and seventh costal cartilages we will produce pain; the same reaction will follow pressure upon their pubic attachments and here posterior to them we find only the bladder. Let us proceed still farther, for the patient is not very fleshy and the experiment is easily carried out. If we pinch between the thumb and index finger the lower insertion of the rectus taking care not to depress the abdominal wall we notice that pain is provoked. Hence, this patient does not suffer from colic as he says, but from a myalgia of the recti. But this muscular pain is not always limited to these muscles for it may affect the obliqui as well as the transeversis, while those of the posterior portion of the wall are rarely involved. Occasionally it has been observed to extend to the chest muscles, but the muscles chiefly affected are those of the abdomen and secondly, the adductors of the thigh. Our patient has no disturbance of the urinary passages. He has no albumen in his urine, but the quantity of urea is considerably reduced in proportion.

Treatment should be first and foremost directed towards relief of the pain. This result is generally obtained by applying a narrow mustard plaster along the affected muscles when there is no cutaneous hyperesthesia. These sinapisms should not be left on long enough to produce either blisters or eschars. In case of cutaneous hyperesthesia we prefer local applications of tincture of iodine. Under the influence of this treatment the muscular pain rapidly disappears, and with it the vomiting; the abdomen which has been tense and hard becomes soft and normally distended, and if not too large a mass has formed in the rectal pouch the patient has a passage of the bowels, for the pain, the principal cause of the constipation, has vanished. If evacuation of the bowels does not follow I usually give a purgative. Our patient has been cured in a few days; the pain disappeared, the vomiting and constipation ceased and the processes of nutrition resumed their normal functions.

But I have said nothing with regard to treatment of the primary cause, and one must attempt to cause elimination of the lead accumulated in the tissues. The metal in the skin may be removed by two or three sulphur baths, followed the next morning by one of soap and water. That in the intestines may be precipitated by the use of sulphurous mineral waters. As to that which has been stored up in the different organs it is best removed by a progressive renovation of the histological elements and keeping the emunctories in working order, particuliarly the kidneys and liver. Here hygeine takes the place of remedies. The iodide of potash which is sometimes administered, would seem to me to have more a harmful than a beneficial influence, for on contact with lead it forms an insoluble sulphate.

Our second patient is also affected with lead poisoning. He is a young man,

twenty-nine years of age, who doubtless, after trying his hand at all the trades, has finally ended in a lead factory. He is an inveterate drinker, his breath is fetid, he has suffered from vomiting since his entrance into the hospital, complains of obstinate constipation for which several purgatives have been given in vain, he presents a pronounced blue line along the gums and suffers from pains not only in the recti muscles, but also in the obliqui and transversi. On the same day that he entered he had no exaggerated cutaneous sensibility, but since then the dermalgia has appeared. This patient also exhibits some of the signs of hysteria, as abolition of the pharyngeal reflex, plaques of anesthesia, tremor, but no narrowing of the visual field nor hyperesthesia of the spine.

We treated his dermalgia by local applications of tincture of iodine; it yielded quite rapidly, but the myalgia was slower to disappear. We were obliged to employ here not only a mustard plaster, but also hypodermics of chloroform. This latter procedure, which we use with success in obstinate cases, consists in injecting into the region of the painful muscles two hypodermic syringefuls of a mixture of equal parts of chloroform and oil of vaseline. Thanks to this measure the pains ceased and with them the obstinate constipation and the vomiting.

These various measures are not the only ones, for others have been praised. Briquet treated lead colic by faradization of the affected muscles. This is, however, too painful, for one must have a care to faradize the skin only and not the muscles, which are apt to be thrown into painful contractions. Injections of morphine are also used, but they have the serious inconvenience of increasing the constipation; belladona, antipyrine in doses of two, three, four and even six grams, have been administered, but they have the inconvenience of not always being tolerated while they have produced gastralgia and gastritis. Professsor Combemale has tried olive oil in large doses of a glass a day, but I doubt if this remedy in such doses would be well borne by the greater number of lead patients, who are so prone not to bear even the mildest beverages. We therefore hold to the tincture of iodine for the dermalgia, to sinapisms for myalgia and sulphurous baths and drinking of sulphurous waters to eliminate the metal. These measures have rarely failed us in the hundreds of lead patients whom we have treated in this manner.

Diabetes Mellitus.

Solis Cohen uses codein in certain cases of this disease in gra. ually increasing doses up to 12 grains or more daily:

Codein phosphate	gr ii
Alcohol	ʒiv
Dilute phosphoric acid	ʒii
Glycerin	ʒvi
Solution of hydrogen dioxide (10 volume) to make	ʒiii

Dose: two teaspoonfuls in 3 ounces of water.

—*College and Clinical Record.*

The Blessedness of Beards.

It is to be feared that too many men deprive themselves of what Shakespeare calls, "Valour's Excrement," without counting the possible cost. Whether the beard be an ornament to the masculine countenance we must leave the ladies to decide. It certainly has its uses in hiding a weak chin, and in some cases it seems to be cultivated as a vicarious compensation for a hairless scalp. It is not, however, in its cosmetic so much as in its hygienic aspects, that the blessedness of the beard—in which term we include the whole of the harvest usually claimed by the razor—is most apparent. That it is a safeguard to the throat is gen erally admitted, and writers of authority have insisted on its value as a protection against toothache and facial neuralgia. This is a goodly sum of advantages to the credit of the beard. Dr. Chabbert, of Toulouse, has, however, yet more to say in its favor. According to this practitioner, the beard seems to be a very efficient defense against that form of facial paralysis, which is caused by cold. This affection is far more common in women than in men, though the latter are, of course, more exposed to the cause that produces it. Professor Andri, of Toulouse, has seen several cases of this affection in women, but not one in man—he has heard of one, indeed, which would appear to be an excellent example of the exception which proves the rule, for the patient was a "lyric artist" with the faccia di musico, so distasteful to Lord Byron. Professor Pitres, of Bordeaux, has seen twelve cases in women and only two in men.—*British Medical Journal.*

COMMUNICATIONS.

RHACHITIC DEFORMITIES—ETIOLOGY, CLINICAL HISTORY, AND LESIONS.*

A. JACOBI, M.D., NEW YORK.

Our subject is the etiology and the lesions of rhachitic deformities. By way of introduction I would say that rhachitic deformities are something new in our country. You have seen so many of them that undoubtedly the younger men here do not remember the time when there were no rhachitic deformities amongst us. Thirty years ago there was no rhachitis, except very rarely a stray mild case. At that time, when I spoke of rhachitis and endeavored to demonstrate a case in my clinic, I had to hunt considerably for material to illustrate this condition. When, twenty-two years ago, I wrote a paper on the first cases of craniotabes I had seen in New York, it was, with the exception of one, by Parry, of Philadelphia, the first paper on this subject ever written in our country. The subject of rhachitis, therefore, is a comparatively novel one. Since that time immigration has been going on, and the poverty-strciken people from the slums of Europe have been accumulating here. As with the greater facilities for transportation science has been equalized all over the globe, so poverty, bad air, and want of every description have equally spread constitutional diseases here. Since then we have seen much rhachitis here. Thus it is that the treatment of rhachitis in the future, although it will always remain medical, will also be a social question.

The principal causes of rhachitic deformity are numerous—the rapid growth, the thick epiphyses, the soft diaphyses, the condition of the ossification cartilage, the traction of the muscles, the debility of the muscles, and the pressure of the atmosphere. The locality where the deformities are found depends largely upon the intensity of growth. Growth is most intense in the young child: (1) In the cranium; (2) in the chest; and lastly only in the extremities. I recapitulate only what you all know when I speak of the rhachitic head, with the thin skin, the dilated veins, and the open sutures and fontanelles for two, three, four, or even nine years, as I have seen it. The edges of the sutures are irregular. Such a head is usually large—actually larger than the normal head—relatively it is very much larger when compared with the frequently small body. It is so large that it resembles sometimes the hydrocephalic head. Indeed, some of these heads are to a certain degree hydrocephalic; some are entirely so. Most of them are brachycephalic, quadrangular, with depression on top. In a peculiar class of cases, first studied by Virchow, that of the cretins and semi-cretins, rhachitis is combined with a premature ossification of the occipito-sphenoid synchondrosis. In this condition the base of the skull is shortened. At the same time there is a deep grooving of the root of the nose, the eyes are widely separated from each other, there is shortening of the vomer, and the flat palate, so characteristic for cretinoid conditions. Not infrequently the occiput is slightly flattened, and the oblique diameters are sometimes not equal, so that one side may appear to be entirely flattened. This is particularly the case when we deal with rickety softening of the cranial bones —craniotabes. In such cases there is much perspiration, with loss of hair on the occiput; the veins are more dilated, the skin thinner and paler than in the average case. In these cases of craniotabes one side may be flattened and the other side bulging. The head may even appear to be triangular. Where one side bulges out, and one side is flattened from pressure, the forehead is very prominent, the frontal bone may have three to five times its normal thickness, because of an

*Read before the American Orthopedic Association, 1894.

immense amount of new periosteal soft growth between the periosteum and the bones, which produces a marked deformity of the forehead. This is not always a temporary affair. It is true that craniotabes may leave no trace if it gets well sufficiently soon; but when there is much deposit under the periosteum, it will sometimes remain. When calcification takes place very suddenly, then the thickening of the bone will remain unabsorbed for life. As a rule, however, most of such thickenings are absorbed.

The condition of the teeth is certainly one which should be considered in connection with rhachitic deformity. The teeth appear late or irregularly; when early, the intervals between the first crop and the second, or between the second and third are very long, sometimes six, eight, or ten months. The teeth are frequently discolored, and they decay very easily. Sometimes, however, we find in the second crop that the teeth are very hard and very yellow. Not infrequently we see "Hutchinson teeth" in rhachitic children. This is one of the reasons why Parrot got the idea of explaining every case of rhachitis as the result of syphilis. The lower jaws are short, narrow and very low; the angles very sharp and prominent. The aveolar processes turn inward. Thus the teeth of the upper jaw do not cover those of the lower jaw. The chin in some cases is very low. From the foregoing remarks it will be seen that well-marked rhachitic heads present a very peculiar appearance.

The trunk in rhachitic persons is very short. The clavicle shows much periosteal thickening; it is very frequently bent forward by the pulling of the muscles, and there is not infrequently an infraction between the middle and anterior thirds.

The chest is the seat of a great deal of deformity. It is frequently triangular, sometimes quadrangular; the dorsum is flat and the scapula clings to the body. The ribs, being soft, form a groove in which the arms are frequently buried. There is a predominance anteriorly. On account of the atmospheric pressure laterally above the diaphragm, there is a horizontal groove, called "Harrison's groove." As there is compression above the diaphragm the lower ribs stand outward. As the chest is compressed laterally the sternum is made to protrude, particularly about the third and fourth ribs, and the antero-posterior diameter lengthened. The ribs are prominent at the ossification points. On the cartilages there are frequently nodulations; a complete rosary may be developed quite early. I have seen it at the age of two months, and a case has been published in which there was a complete rosary in a baby of only three weeks. In these extreme cases, the sternum is flat, and the manubrium stands out. Frequently it is pressed down above so as to stand out at an angle at its lower end. The lower end of the sternum may be retracted while the ensiform process protrudes.

Kyphosis is very frequently seen in these cases. It is often but an exaggeration of the normal curvature. Scoliosis has mostly its convexity to the right with compensation above and below. The spinous processes are very frequently directed to the concavity. The intercostal spaces are very narrow on the left side, because there is less curvature of the ribs, and the ribs are bent out.

In the grown-up woman the antero-posterior diameter of the pelvis is shortened. This is not seen to the same extent in the babe. In the normal baby the pelvis is small and the sacrum very steep, not concave as in the adult. Therefore, when compression has taken place because of softening, it is still smaller, so that it is often quite difficult to examine the pelvis satisfactorily; the sacrum may be so changed as to give rise to a convexity inward and contraction of the two sides. This narrowing may be due to the mere fact that the softened bones are compressed on the pillow, or by the arms of the nurse, a pressure which is slight, it is true, but quite sufficient. In very mild cases the symphysis is changed but little. In a number of instances, however, it will be found to be bent forward, and thus in very early rhachitis the rhachitic pelvis may be very similar to the pelvis deformed by osteomalacia. This is contrary to the usual description in the books of obstetrics.

The extremities suffer in different ways in all their parts, the epiphyses and diaphyses, the periosteum, and the epiphyseal cartilages. The epiphysis is frequently thick and painful, particularly on the forearm and tibia. A number of cases of so-called "growing pains" are simply in-

stances of rhachitic epiphysitis. Sometimes the thickening is very considerable; in most cases it is uniform, but in some it is more developed laterally. This is particularly the case on the upper part of the thigh. The diaphysis is usually bent. Semi-fractures take place on the arm, clavicle and legs, from a very trifling application of force. The periosteum, however, being soft, always acts as a shield to the inflamed bone when exposed to the danger of fracturing. In all those cases in which there is much curvature, particularly in the lower extremity, the concavity is inward, and on the forearm and thighs it is very often anteriorly. The difference in the direction of the curvatures depends on the influence of the muscular traction or of the weight of the body. In the very young the concavity of the lower extremity is inward, because of the effect of the flexor muscles. When the bones become, or remain, soft in those who attempt to walk, the weight of the body results in outward curvatures and torsions of many kinds.

The ligaments are very flabby, and give rise to the flat-foot in children that stand up and attempt walking. The periosteum suffers a great deal and in different ways. It is softened and exhibits a thick layer of rhachitic deposit. Calcification occurs in time, and then the diaphysis will be much thicker and harder than in normal conditions. The bones of rhachitical patients, when recovered, are solid and able to stand a great deal of hardship in later life.

In the rhachitical periosteum there may be hemorrhages. Not infrequently in bad cases of rhachitis, and in those cases which in the course of general ill-nutrition develop purpura, there are hemorrhages under the periosteum in the lower and upper extremities. Such cases of decided rhachitis, and those which exhibit similar hemorrhages without being markedly rhachitic, have been thrown together under the heading of, in this country, "scurvy," and abroad, "acute rickets." In all of these cases the children are ill-fed; there is a great deal of pain in the lower extremities and feet, sometimes with and sometimes without periostitis. The hemorrhages will heal and leave a thickening in part of the cases. Hemorrhage of the gums is not a requisite for the diagnosis; it may be absent in those who have no teeth, or who have, and present even where there are no teeth.

Finally, deformities consisting of shortening of the whole limb are due to the early calcification of the epiphyseal cartilages, for it is on their physiological function that the length of the diaphysis depends. When calcification is complete the growth of the bone and that of the limb ceases.

I wish to remind you that rhachitis is a general constitutional disease. In it we have to deal not only with the bones, but with the general system, particularly with another part of the ~~locomotor system~~—the muscles. The muscles suffer just as well as the bones in rhachitis, and give rise to certain deformities. Both voluntary and involuntary muscles are affected. What has been called rhachitical pseudo-paralysis is not paralysis; it is simply a weakness of the muscles and nothing else. We should have been spared this new term. The muscles are simply poorly developed, and in consequence they are easily fatigued. The involuntary muscles suffer in the same way.

While the muscular tissue is poorly developed, fat is liable to be ample. Rhachitical children, unless emaciated by pulmonary or intestinal disease, are apt to be heavy and rotund, and their weight and appearance are often mistaken for healthy development. But they are flabby, anæmic, and not capable of resisting the attacks of ordinary disease like well children. They prove, moreover, that weight alone is not the measure for healthy and steady evolution.

The muscles in such subjects are flabby, and, consequently, the stomach is apt to be dilated, and the muscular layers of the intestines are apt to give way, thus giving rise to large, flabby abdomens filled with gas, on the surface of which are dilated veins.

The expansion of the intestines, owing to the weakness of the muscles, gives rise to constipation. This constipation is characteristic. Rhachitic children become constipated very early. It is sometimes the first symptom of rhachitis, and shows that the muscles participate in the process at a very early stage. It may begin at the second or third month of life in a child presenting evidences of fairly good nutrition; and it at once leads us to suspect rhachitis. Some deformity of the

abdomen may be due to the spleen, liver and kidneys. In consequence of "Harrison's groove" the liver and spleen are not infrequently displaced, and these organs for the same reason may appear larger than they really are. The kidneys may be found floating. Most of the cases of floating kidney occurring in children that I have met with were in rhachitic patients, showing "Harrison's groove" well developed. But there are cases in which the spleen and liver are actually enlarged from slow congestion and interstitial hyperplasia. They cause the same deformity that is occasionally seen in syphilitic subjects. This is another reason why Parrot came to the conclusion that every case of rhachitis must be syphilitic.

RHACHITIS.—ITS VARIOUS MANIFESTATIONS—DIAGNOSIS, DIFFERENTIAL DIAGNOSIS AND PROGNOSIS.*

BENJAMIN LEE, M.D., PHILADELPHIA.

The essence of rickets being the failure on the part of the system to assimilate the earthly salts, and especially the phosphate of lime, we should naturally look for its principal manifestations in those tissues of which lime and phosphorous, singly or in combination, form essential constituents, namely, the nervous and the osseous tissues. And the nervous tissue being more sensitive to irritation and more prone to rapid trophic changes than the osseous, it would not be unreasonable to expect that the results of such imperfect nutrition should first manifest themselves in the perturbation of functions peculiar to it, even though the organic processes of impairment might be going on simultaneously in both. For reasons which we do not understand, however, the nervous disturbances may sometimes be so slight as to elicit little attention, or, even if somewhat marked, may be entirely misinterpreted even in cases in which the degeneration of the osseous tissue becomes considerable. The comparative rarity of the affection in this country is apt to throw us off our guard, and many cases of this disease run their course under the name of gastro-enteritis, intestinal indigestion, intestinal catarrh, and so on, all of which conditions, indeed, may complicate the initial disease. In thus broadly characterizing the nature of this disorder, I do not forget the fact that it has been demonstrated that arterial enlargement or dilatation is a frequent, if not an invariable, accompaniment of the other changes; but it appears to me more philosophical to regard that as one of the morbid processes due to the vice of nutrition rather than as the cause of the alterations in the tissues referred to.

It is a well-established fact that children may be born rhachitic. In that case the symptoms of faulty nutrition of the nerve-centres may be present from birth. Otherwise they may develop at any time in the course of the first three years of life, but oftenest during the period of lactation. It is not uncommon for a rhachitic infant to appear vigorous and robust during the first two or three months of life, and even to take on an excessive amount of fat. It will usually, however, offer indications of indigestion, especially in the intestinal tract. This may be accompanied either by obstinate constipation or by diarrhœa; at first oftener by constipation. Frequent attacks of severe colic are not uncommon. The abdomen is tumid. Such infants are poor sleepers, having restless, disturbed nights. It goes without saying, that we should be more on the alert for early indications of this trouble in bottle-fed infants than in those at the breast. This condition may continue for from one to three or four months without further development. It may be that unduly retarded dentition will be the first circumstance to call attention to the probable character of the disturbance. As nutrition of the brain becomes more impaired nervous irritability increases, as evinced by constant fretfulness indicative

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of suffering, restless tossing, especially of the arms, rolling the head from side to side, and loss of interest in surrounding objects. Convulsions are not uncommon. Some writers go so far as to say that rickets is by far the most common cause of infantile convulsions. This statement appears to me somewhat exaggerated. When they do occur they present the ordinary picture—fixation of eyes, pallor, rigidity, embarrassed respiration, with inversion of the thumbs and great toes—"carpopedal contraction." The tonic spasm known as tetany is of frequent occurrence. Less severe cerebral irritation may be manifested simply by twitching of the eyes and lids or of the facial muscles. These disturbances may continue for a few days or may persist at intervals for months. One of the most characteristic of the convulsive manifestations is that of spasm of the larynx, to which the name of laryngismus stridulus has been given, from the hoarse metallic tone produced by the rushing of the air through the tense glottis when the spasm begins to relax. This may occur in various degrees of severity, from a mere momentary holding of the breath to so prolonged a period of suffocation as to threaten, if not actually cause, death.

Implication of the vasomotor nerves is indicated about this time by enlargement of the arteries, already referred to, consecutive enlargement of the veins of the head and the neck, and profuse sweating of the head, especially during sleep.

To the same general cause may be assigned the bronchial catarrh, accompanied by cough, which passes under the name of chronic bronchitis, and often masks the true character of the disorder. Sensory disturbances of the nervous system may occur at almost any time. These manifest themselves as general hyperæsthesia, the flesh being sensitive to pressure at any point, or as tenderness in the joints, producing pain on motion. The child then shows the greatest disinclination to being moved, preferring to lie undisturbed upon the back, and caring little to be amused. Should he be old enough to walk he will gradually evince less and less desire for locomotion until he abandons the effort altogether. This has been explained by the fact that walking caused pain, or on the ground of general debility. My own belief is that there is an actual paresis in many cases, due simply to nerve starvation, and affecting more particularly the nerve fibrils distributed in the muscular tissue, in which the processes of metamorphosis and nutrition are to so great an extent carried on.

More or less closely following the manifestations referable to deficient nutrition of the nerve-tissue appear the trophic changes in the bones. One of the earliest is that known as cranio-tabes, consisting in defective and irregular development from the various centers of ossification in the skull, and perhaps even of absorption of bone cells. This is noticed in undue patency of the fontanelles and sutures and irregular depressions in the occipital region. The sensation conveyed to the examining finger is that of the existence of small oval hollows or soft spots in the occiput. The head is not usually large unless hydrocephalus be present, but is apt to be long, and the forehead is somewhat prominent and bulges laterally, like the prow of a Dutch lugger. Not only is dentition often delayed, but the teeth emerge more widely separated than usual, and are frequently notched as in inherited syphilis. It is in the long bones, however, that the more striking changes occur. These are enlargements of the epiphyses and softening of the shafts, the former due to excessive proliferation, the latter to loss of the mineral framework. The wrists and ankles become awkwardly large and bulbous, while the shafts yield to undue pressure or muscular contraction, thus producing curvatures in the limbs. Among the first of the long bones to afford indication of the changes going on are the ribs, which become enlarged at the sternal extremity, or "beaded," as the phrase is. To this succession of small prominences along either edge the French have given the somewhat fanciful name of the "rhachitic rosary." Curvation of the shafts may begin very early, especially in the tibia. While it progresses more rapidly under the pressure of the weight of the body if the patient is walking, yet it is easily recognizable in infants who have never attempted to stand.

The deformities caused by the rhachitic vice of nutrition are so varied that to describe them would open up the whole subject of orthopedics. Bow-legs, knock-knee, flat-foot, the various spinal deviations, pelvic irregularities and contrac-

tions, and thoracic distortions may all be traced to it. The deformity of the chest is characteristic. The clavicles (well named) lose their power to act as braces, their curves become exaggerated, the shoulders fall together, the sternum and, with it, the anterior extremities of the ribs are forced out, and chicken-breast is developed, often exaggerated at the base of the thorax by the abdominal distention already referred to.

Lateral curvature of the spine, although often resulting, is less frequently observed than posterior curvature, involving the entire spine, but most marked in the dorso lumbar region. In standing this curve is often apparently reversed, owing to obliquity of the pelvis and the necessities of equilibriation, producing a marked lordosis

The diagnosis of rickets is a matter of little difficulty when once the characteristic bone-changes have developed in any considerable degree, and it is in that stage that cases usually come under the observation of the orthopedist. But in the early months of the affection, when it is usually amenable to treatment, as hinted at the opening of the paper, it unquestionably often escapes recognition until irreparable injury has been done. Constantly compelled, as we are, to witness the life-long mortification and misery which attend the later manifestations, it would seem to be our duty to call the attention of family practitioners to the great importance of being on the watch for the earliest indications of the disease in artificially nourished infants. This affords one of the many fields opening for preventive medicine. The diagnostic marks have been sufficiently pointed out in the description of the manifestations of the affection.

As regards the *differential diagnosis*, attention has already been called to the fact that in its incipiency it is frequently treated for comparatively long periods as a gastro-enteric disorder, just as spinal caries has too often been, owing to the fact of its initial gastralgia. The practitioner may also be misled by the *quasi* chronic bronchitis.

Bradford and Lovett in an admirable *resume* of the subject in their *Treatise on Orthopedic Surgery*, say: "Rickets is so often the outcome of a long period of ill-health that it is difficult to say where the rhachitic symptoms begin." To this statement I take respectful exception. I believe the long period of ill-health which often precedes the characteristic lesions to be simply the initial stage and not the cause of the disease. It is the failure to recognize this initial stage which leads to the development of so much deformity. Any bottle-fed infant who suffers from constant indigestion and nervous irritability should be subjected to the most careful scrutiny. If profuse sweating of the head, abnormally large secretion of urine, copious phosphatic deposits in the urine, and hyperæsthesia are found to exist, it is quite unnecessary to wait for lesions of the osseous tissue to confirm the suspicion of the existence of rickets.

Rhachitis may be mistaken for Pott's disease, true lateral curvature, congenital syphilis, and acute rheumatism.

The first-mentioned affection is the only one which is likely to produce much confusion in the mind of the practitioner, and from that the discrimination is often extremely difficult when the excurvation is in the lower third of the spine.

In Pott's disease the rigidity is greater and more persistent, especially on first awaking from sleep; the paroxysms of pain are more acute, and in the intervals of pain the little sufferer is comparatively cheerful. There is not the history of traumatism in rickets which is almost always found in caries. There is often a peculiar transparent waxy pallor in the earlier stages of rickets which does not accompany the same stage of the tubercular disease.

Idiopathic lateral curvature rarely occurs at the early stage at which rickets appears, and the latter disease has set its unmistakable seal on other parts of the skeleton before the spine has begun to show serious indications of distortion.

Acute rheumatism is rare in infants, is acute in its course, and is usually accompanied by high fever. The periarticular swelling, with frequent red discoloration of that disease, is quite unlike the clubbing of the ends of the bones in that under discussion.

The absence of snuffles, sore throat and mucous-membrane and skin lesions serve to differentiate the latter from syphilis of the newborn, although there is some similarity in the bone changes.

Of the necessity for the exercise of the

utmost care in avoiding the error of confounding the early symptoms with those of simple bronchitis and gastro-enteric disturbances, and of the means of so doing, enough has been said above.

The *prognosis* of rhachitis is to be considered with reference first to fatal result, and secondly to the production of deformity.

The books usually make very light of the gravity of the affection as threatening life. It certainly figures very rarely in the mortality returns. I believe that this is due in part to failure to recognize the disease, and that very many cases which have the death certificate made out for acute pulmonary diseases, convulsions, or disorders of the digestive tracts, ought properly to be labelled "rickets." An affection which so profoundly affects the nutrition cannot be regarded as trifling. The diarrhœa of rhachitis will sometimes carry off its victim in a few hours with all the violence of *cholera infantum*, and the bronchial catarrh which has continued for weeks with little modification, may suddenly terminate in a fatal engorgement of the lungs. Too great vigilance cannot be exerted, therefore, for the detection of the disease at the earliest possible moment, inasmuch as the usual remedies for the other affections named, if not positively harmful, will at least have no beneficial effect on this deep-seated vice of assimilation.

Discovered in time, however, it is usually amenable to treatment, and in the very large majority of cases not only can life be saved, but serious deformity can be averted. It is often as surprising as it is gratifying to see what appropriate regimen and medication, unaided, will accomplish toward the correction of very marked distortions of rhachitic origin. Add to these the potent influence of massage over the nutritive processes, the mechanical redressment which can be effected by carefully regulated exercise, both passive and active, and our ability to control and correct processes of deformation by judiciously devised appliances, and the outlook becomes a very hopeful one. When once decided changes have shown themselves in the skeleton, even if distortion can be avoided, loss of stature will inevitably result.

In conclusion, I would call attention to the fact which I think I have observed, that rickets and its congener, scurvy in infancy, have within the past few years been decidedly on the increase. In point of fact, if one looks over the text-books on the diseases of children, written forty or fifty years ago, he will fail to find the slightest allusion to the last-named disease. And this, notwithstanding the fact that our fathers in medicine saw it twenty times in the adult where we see it once. Manifestly it was not for want of familiarity with its symptoms that they failed to recognize it as one of the infantile diseases. Indeed, we need hardly go back more than ten years to find medical literature barren of allusions to this subject. To what are we to attribute this somewhat sudden increase in diseases of defective nutrition. Is it simply a coincidence that this condition has developed simultaneously with and *pari passu* with the introduction of the practice of the sterilization of milk? One curious feature of this increased development of these affections is that we meet it not among the poor, not among those whose hygienic environment is faulty and whose food supply is insufficient or of inferior quality, but among the children of the wealthy, who live under the most favorable conditions, with strictest attention to hygienic precautions and an abundant supply of the richest milk.

Let us consider for a moment the part which ferments play in the preparation of food for digestion and assimilation. We know to how great an extent the digestibility of the great staple of life, bread, is increased by the development in the flour of the *saccharomyces cerevisiæ;* how beer in its various forms becomes a wholesome drink through the action of the same ferment; how the vinous fermentation furnishes both healthful beverages and useful stimuli; how the acetic fermentation supplies us a most valuable condiment. We also know that of all the ferments none approaches so near the fluid known as the gastric juice as lactic acid. We know what a wholesome and nutritious article of diet milk becomes in the shape of curds and whey, buttermilk, cheese, and matzoon, after having been acted on by the lactic-acid ferment. We know that under all ordinary conditions milk contains the lactic-acid bacterium. Now, is not the supposition warranted that, up to the point when this ferment has been devel-

oped in milk to such an extent as to produce an acid taste, which leads most persons to dislike it, its action on that fluid may be in the highest degree favorable to its digestibility and assimilability? Moreover, may not the lactic acid have a very important function in taking up the lime-salts, and in combination with phosphoric acid, putting them in condition to be absorbed by lacteals and appropriated by the system? The fact that sterilized milk is indigestible no one questions. May we not be denying our infants some of the most important of the constituents of milk, allowing them only the fats while we deprive them of the salts? To atone for presenting them a less-digestible milk we pre-digest it, thus depriving the stomach of the natural stimulus afforded by the presence of food requiring digestion, discouraging the secretion of the gastric juice, and still further interfering with the assimilation of the mineral constituents. Do we not perhaps need to revise our recent conclusions on the subject of infant diet and sterilization of milk?

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

TREATMENT OF FRESH WOUNDS.

Dr. Wechselmann (*Medicinische Neuigkeiten*, No. 45, 1894) warns the general practitioner against the use of the multitude of new antiseptics which have recently been thrown upon the market, for they are of doubtful value and dear. The bichloride, carbolic acid and iodoform are the standard antiseptics. Besides these absorbent cotton, sterilized mull, iodoform gauze, pure soda, potash soap sublimated silk and bandages are the requisites for the surgical bag. The chief duty of the physician in fresh wounds is the prevention of infection. The first important feature is the disinfection of his own hands. Here Fuerbringer's advice is applicable: washing the hands for one minute, with a brush, potash soap and warm water, then follow for one minute with alcohol and finally, for one minute, washing with a bichloride solution, 1:1000. The brush should be kept continuously in a 1:1000 solution of the bichloride or be frequently boiled in a soda solution. It is more convenient to keep special brushes for suppurating wounds as well as special instruments also for this purpose: two scalpels, one dressing forcep, an artery forcep, a pair of shears and a director. They should be boiled for fifteen minutes after each time used in a solution of soda. A simple enameled kettle is quite sufficient. The instruments are merely placed in this vessel, enough water placed over them to cover them and about a tablespoonful of soda added for each quart of water and then it is placed on the stove. In ten to fifteen minutes while the other preparations are being made they will have been boiled sufficiently. The kettle and the instruments are then cooled by placing it in a larger vessel of cold water. In a the fresh wound one may proceed as follows: wound is first covered without having been previously touched, with a compress wet with a solution of the bichloride, 1:1000, the instruments sterilized as directed, the hands disinfected, the vicinity of the wound disinfected by washing with potash soap and water always away from the wound towards the periphery, if necessary shaving and then with a second washing with alcohol and the bichloride. The wound is then covered with a second compress, the hands again disinfected, the instruments then are taken out of the soda solution and placed into a clean dish (no antiseptic solution is necessary) and then the wound is attended to. In wounds that are greatly crushed or where asepsis is doubtful a place should be left open and slight drainage be made with a strip of iodoform gauze. The wound is then dusted with iodoform powder, covered with iodoform gauze and with absorbent

* In charge of the translator, F. H. Pritchard, M.D.

cotton and then over this a simple mull or starched gauze bandage. The first dressing should be renewed according to the size of the wound from the third to the fifth day when, at the same time the stitches and drainage may be partially or wholly removed. The second dressing should be removed if an uncomplicated course is expected at about the time that healing will have taken place, as too frequent and unnecessary changing of the dressing only hinders healing. After this a piece of cloth, spread with a boric acid salve, is quite sufficient. In suppurating or otherwise infected wounds dry dressings do not do as well as moist ones which are changed once a day or oftener. Here compress, wet with a 1:2000 or a salicylic acid solution, over which is placed gutta percha, paper, etc., will do good service. Beware here of a carbolic solution which frequently acts as a caustic and on the fingers gives rise to gangrene.

MERCURIAL TREATMENT OF TABES DORSALIS.

Dr. Shuster (*La Semaine Médicale*, No. 71, 1894) is an advocate of mercury in tabes dorsalis. It is contraindicated in those weakened by long duration of the disease, while in those still robust it will bring about a decided amelioration, and that not only where there is syphilitic history, but where the antecedents are negative on this point. It is best administered as the bichloride in pill form and in daily doses of one milligram, continued for a long time, and in connection with the following pill:

Arsenious acid.....	o	05	gr. ¾
Strychnine.....	o	10	" jss
Extr. and powdered licorice. ..	q	s.	

Sufficient for one hundred pills. One to two a day.

TREATMENT OF URTICARIA.

Dr. Brocq (*Revue Intérnationale de Medecine et de Chirurgie Pratigues*, No. 19, 1894) recommends, in the management of urticaria, the following measures:

Apply locally the following salve:

Carbolic acid.....			
Essence peppermint.....	ää 1	o	grs. xv
Oxyde zinc			
Lanoline.....	ää 20	o	3v
Pure vaseline.....	60	o	3ij

At the same time, prescribe each day from two to six of the following pills:

Muriate quinine.....			
Ergotine.....	ää o	10	grs. jss
Extr. belladonna.....	o 01–0	02	" ½–½

Before applying the ointment one may apply locally a lotion with vinegar, cologne water or chloral as a base.

CHLORATE OF SODA AS A REMEDY.

Dr. Barrat (*La Medicine Moderne*, No. 8, 1894) has found the chlorate of soda less toxic and more soluble than the corresponding potash salt. He has given it in two cases of cancer of the stomach, in doses of ten grams (3ijss) a day, in one of which he claims a successful result (?). In a case of epithelioma of the upper lip he injected a cubic centimetre (gtts. xv) every two days into several points of the tumor. The result was successful for healing followed.

DISAGREEABLE A TION OF THE DIPHTHERIA ANTITOXINE.

Dr. V. Cnvrim (*Deutsche Medicinische Wochenschrift*, No. 48, 1894) injected a fellow practitioner for a diphtheritic attack with ten ccms. of Hoechster serum, No. 2, respectively, No. 3. The disease soon disappeared. In six days an urticaria like exanthem appeared on the thigh at the place of injection, followed in the next few days by enlargement of the neighboring glands, pains in the elbow and knee joints, muscular pains with hammering headache and a rise of temperature to 39.5° C. In ten days from the time when first injected the symptoms began to decrease. Dr. K. was also attacked with similar symptoms after injection of 10 ccms. of serum No. 1. Here the general symptoms appeared after four days, the first glandular involvement after seven days, as in the former case at an angle of the jaw, and urticaria appeared on the eighth day. From the eleventh day the symptoms began to abate. Even twenty-one days after he experienced pains in his right arm and had difficulty in using it.

LOCAL TREATMENT OF DIPHTHERIA.

Dr. Ignatovsky (*La Semaine Médicale*, No. 67, 1894) speaks highly of the following as quite efficient in the local treatment of diphtheria:

Essence of peppermint	8	o	3 ij
Essence of turpentine.....			
Petroleum, ää.....	30	o	3 j

Apply locally on a swab every one to two hours.

HOW AND WHEN TO GIVE DIGITALIS.

Professor Huchard (*Médicine Moderne*, No. 9, 1894) protests against the tendency of physicians to wait in asystolia until the disease has reached its final stage. On the contrary, one must act energetically from the very beginning. The three capital indications for the use of digitalis are:

1. Weakening of the contractile force of the heart.
2. Lowering of arterial with heightening of venous tension.
3. Scanty urine with peripheral œdema and visceral congestions.

One should not wait until these congestions have set in, but give the remedy as soon as perimalleolar or peritibial œdema is noticed in the evening. Before administering it he would have his patient rest in bed and put him on partial or absolute milk diet for several days. The second or third day he would administer a purgative consisting of 60 cgms. (grs. ix) of calomel and resin of scammony in two powders. The following day he prescribes 40 to 50 drops of a 1-100 solution of crystalized digitaline, *i.e.*, 1 mgms. of the amorphous variety. The next day its effects will be remarked and the quantity of urine will be increased.

TREATMENT OF THREATENING AND INEVITABLE ABORTION.

Dr. C. Marocco (*Le Semaine Médicale*, No. 67, 1894), in cases of unavoidable abortion, advises tamponing the vagina with gauze soaked in glycerine and administering internally one of the following powders:

Phenacetine.....	0 | 30	grs. v
Muriate morphine.....	0 | 01	grs. 1-6

Sufficient for one powder. Make three such. One each hour.

Under the influence of this treatment the abortion will terminate almost without pain in twenty-four hours.

COMPARATIVE VALUE OF THE DIFFERENT PREPARATIONS OF IRON IN ANEMIA.

Dr. Herschell (*Medicinische Neuigkeiten* No. 49, 1894) has experimented on sixty-five polyclinic patients with regard to the comparative therapeutic value of the various preparations of iron in anemia and he has obtained results which deserve to be known. As a means of determining he employed Fleischl's hæmometer before beginning and on the twentieth day of treatment. His results were as follows:

Blaud's pills gave an average daily increase of 1.2 per cent. (tabloids).
Blaud's pills gave an average daily increase of 0.5 per cent. (ordinary pills).
Sulphate of iron gave an average daily increase of 0.5 per cent
Chlorate of iron gave an average daily increase of 0.5 per cent.
Citrate of iron gave an average daily increase of 0.5 per cent.
Albuminate of iron gave an average daily increase of 0.125 per cent.
Dialyzed iron gave an average daily increase of 0.125 per cent.

These results are in striking contrast with those claimed to have been obtained with the different albuminates sold by the various manufacturers. This may be explained by the fact that the carbonate of iron is most active in statu nascendi, *i.e.*, when formed in the stomach by the mutual action of the sulphate of iron and the carbonate of potash upon each other as takes place with Blaud's pills. With the albuminates, peptonates and colloid preparations a deposit of the insoluble carbonate is formed in the stomach when coming in contact with the hydrochloric acid. Hence the old method of prescribing iron is still the best.

POISONING BY A THERAPEUTIC DOSE OF CREASOTE.

Dr. Zanadski (*Wiener Medizinische Presse* No. 51, 1894) reports the case of a women who within twenty-four hours took six drops of creasote, three times, in milk. Soon symptoms of intense disturbance of the stomach and intestines followed accompanied by anesthesia and paresis of the velum palati and of the vocal cords; besides she presented traces of its caustic action on the mucous membrane of the mouth and throat, albuminuria and signs of heart weakness; the breath smelled strongly of creasote. Death followed after a week. The necropsy revealed numerous bloody suffusions of the stomach and intestines, a few ulcerations of the œsophagus and pyloric end of the stomach, degeneration of the liver, acute nephritis and hyperemia of the brain. He explains this unfortunate result by the fact that creasote is insoluble in milk and acts as if undiluted and to a peculiar idiosyncrasy. He therefore recommends beginning with small doses, one to two drops, and only gradually increasing the dose.

POISONING BY GLYCERINE AS A VEHICLE FOR IODOFORM

Dr. Schellenberg (*Hospitals Tidende* No. 51, 1894) would reject entirely the use of glycerine as a vehicle for iodoform in its local use, as it is capable of giving rise of decidedly disagreeable or even fatal results. He would at least advise great caution in employing it on extensive wound surfaces or in large cavities. He would regard ten ccms. as the largest quantity to be used at one time in children and twenty to twenty-five ccms. in adults. Glycerine is capable of provoking all degrees of renal irritation from reddish discoloration of the urine, with presence of red blood corpuscles and casts, to a state of collapse with uremia and death.

LEMON JUICE AS A HEMOSTATIC.

Dr. E. T. Burton (*Wiener Medizinische Presse*, No. 49, 1894) speaks highly of the use of lemon juice as a hemostatic. In a severe case of epistaxis, in a plethoric young man with copious hemorrhage from both nostrils, after injection of a solution of lemon juice and water (1:4) into the nose with an ordinary glass syringe the hemorrhage ceased. In a case of hematemesis in a woman of thirty years, in whom all the usual remedies had failed the hemorrhage ceased at once after employment of pure lemon juice. It returned, however, the next day but was rapidly controlled by the use of this simple remedy so that she rapidly convalesced. In a case of intestinal hemorrhage, in typhoid fever, it was also given with equally favorable results, for it ceased as if by magic. The patient died, however, from exhaustion. In the last two cases there was violent vomiting and everything except the lemon juice was ejected.

HEART DISEASE AFTER THE GRIPPE.

Dr. Sansom (*Hospitals Tidende*, No. 50, 1894) finds that some of these cases require nothing beyond a regulation of the hygiene as they present no symptoms. As a rule the patient suffers more or less and the physician may be called during a dyspeptic attack or a "vagus storm," as he calls it. These are best treated by bismuth and alkalies or together with small doses of arsenic. During the painful crises morphine subcutaneously is occasionally necessary though opium, as a rule, is not tolerated. Phenacetine is an excellent remedy in controlling the pain; chloralamid is of service in the sleeplessness, sulphonal is by no means harmless and chloral and the opiates are injurious. In the treatment of arhythmia digitalis is harmful and all other heart remedies excepting belladonna are inactive; this latter, in some cases, has given him good results. Though the action is not so striking as in tachycardia yet a beneficial result will be obtained by application of the galvanic current to the pneumogastrics. It may be applied for six minutes, three times a day, but it must be quite weak. At least six months are necessary before marked improvement is noticed.

COCAINE TO STOP THE SECRETION OF MILK.

Dr. E. Casoli (*Norsk Magazin for Lægevidenskaben*, No. 12, 1894) in a woman whose child died soon after its birth and who was troubled with a profuse secretion of milk, ordered her apply to both breasts, twice a day, a five per cent. solution of cocaine. In one day the secretion was greatly diminished and in two days it had ceased entirely.

TREATMENT OF POST-PARTUM HEMORRHAGE.

Professor Leopold (*Lo Sperimentale*, No. 35) says that if one be called to a woman who is losing blood, on account of the difficulty of ascertaining promptly the cause of hemorrhage one should proceed to examine systematically. The bladder should be first emptied; then it should be seen if the uterus is contracted; if this be so, then the hemorrhage comes from the vagina, the cervix or the lacerated clitoris. If examination of the placenta shows a piece to be lacking, it should be sought for and extracted. As to the membranes the treatment differs, for only those in the vagina or cervix are to be removed. Cervical lacerations should be looked for and treated. If this is impossible, tamponing is the next best measure which, however, has its disadvantages on account of one being obliged frequently to employ material which is far from aseptic. Tamponing the vagina alone is not sufficient as the hemorrhage is liable to continue into the uterus. In extensive

laceration of the cervix, introduction of the hand into the vagina and manual compression of the lips of the collum with the hand, if continued for ten minutes or longer, will suffice in some cases. On the contrary, the cervix may be drawn down and the laceration be sutured. Tamponade of the lower segment of the uterus will sometimes suffice when this fails. He thinks that post-partum hemorrhage is often due to too rapid expulsion of the placenta by the physician. Tamponade is especially indicated in atonic hemorrhages.

TREATMENT OF NEPHRITIS WITH THE WET PACK AND PILOCARPINE EXTERNALLY.

Dr. H. Mollière (*Wiener Medicinische Presse*, No. 49, 1894) warmly advocates the use of the wet pack and pilocarpine in the treatment of nephritis. The latter remedy is employed as a salve of the following constituency:

Nitrate pilocarpine....0.05–0	10	(gr. ¾–jss.)
White vaseline 100	0	(℥ij ℥j.)

The whole trunk is rubbed with this salve. Large doses of the drug will cause disagreeable skin eruptions which will render interruption of treatment necessary. After inunction a layer of cotton batten is applied, over this some impermeable material and the whole fixed by a bandage. The dressing is only changed when it is completely saturated with sweat; it may be renewed after several hours. The results were the same in patients with and without milk diet and consisted in a rapid recovery in acute and immediate improvement in chronic cases. In these latter the result might extend over several years. He has treated thus at least fifty cases, and in all except in those where there were signs of extensive destruction of renal parenchyma the results were quite satisfactory. The advantages of his method he claims are in the sudorific properties of pilocarpine and the increased diuretic action which is the more efficacious as it takes place through the nervous system and not through an action on the kidneys. The action of the drug seems to be purely local for none could be detected in the urine. He thinks his method of especial value during convalescence when the patient is tired of milk diet and returns to an ordinary diet.

GUAIACOL IN TONSILLITIS.

Dr. E. Darbouet (*La Semaine Medicale*, No. 70, 1894) is quite enthusiastic over the results which he has obtained with guaiacol in the treatment of tonsillitis. He would not advise its use pure as it is too irritating, but mixes it with equal parts of glycerine; in children in proportion of one to two. He applies it locally on a swab four times in twenty-four hours, late at night before going to bed and early in the morning. Thus the patient will pass a comfortable night. The first sensation is disagreeable but this soon disappears and, in a moment, the patient finds to his astonishment he can easily swallow. The painfulness returns, but is well under control of the remedy.

Methol in Diptheria.

F. Kastorsky (*Brit. Med. Jour.* reports thirty-seven cases of diphtheria (in three adults and thirty-four children) treated and cured by painting with a ten per cent. alcoholic solution of menthol. The paintings (by means of a piece of cotton wool) were usually carried out three times daily. In some cases, however, a single free application was followed by complete disappearance of false membranes within two days. A marked improvement in the patient's general condition was invariably noticed from the beginning of the treatment. The same simple method was successfully practiced by the author in numerous cases of anginas of various forms, and by Trütovsky in a group of cases of scarlatinal diphtheria.

A New Method of Disinfecting the Mouth and Throat.

Experimenting with colored fluids, the author found that only the soft palate and tongue came in contact with the solution used, and consequently they are without value. He recommends the use of bonbons made from saccharine and resin guaiaci, and claims that in their use the entire mucous membrane of the mouth and throat is brought into contact with the disinfectant used. Their value is proven in that the bacteriological examination of the secretion of the mouth shows it to be free from bacteria after the use of the bonbons, when they had been present before.—*Szanas in Archiv. fur Kinderheikunde, Arch of Pediatrics.*

BACTERIOLOGICAL NOTES.

BACTERICIDAL POWER OF DOG'S BLOOD AND ITS RICHNESS IN LEUCOCYTES.

Much has been written upon the bactericidal power of the blood of different animals. The practical outcome of this work is being manifested at present in the use of serum in the treatment of diphtheria. In view of the importance which often attaches to the results of apparently insignificant experiments, the results of such work as Havet has recorded (*La Cellule*, x (1894) p. 221) should not be overlooked. Havet has carried on experiments with dogs for the purpose of testing the germicidal effect of serum. He finds that the white blood corpuscles almost or altogether disappear when microbic products are injected into the blood, and this disappearance is coincident with partial or total loss of bactericidal power. As the leucocytes reappear the bactericidal power of the serum returns *pari passu*. When living cultures are injected into the tissues, the stage of hypoleucocytosis is accompanied by a diminution of the bactericidal power and conversely, hyperleucocytosis by increase. This increase is due to the presence of leucocytes in greater numbers, and is not the result of some newly acquired property of the serum. No fixed relationship between richness in leucocytes and bactericidal power can be established, for the leucocytes may be weakened either by a previous digestion of microbes, or by microbic poison. Leucocytes, in case of two kinds of organisms, may incorporate both or only one.

DIFFERENCES BETWEEN BACTERIUM COLI COMMUNE AND BACILLUS TYPHOSUS.

Fremlin (*Archiv f. Hygiene* xix, p. 295) enters into a long discussion of the differences existing between these two species of bacteria. He has compared the morphological, cultural and pathogenic properties of these two species. He used cultures of *B coli* obtained from man and several of the lower animals. He found that *B coli* presented two appearances on gelatin, viz., membraniform film and points. He finds that there are distinct differences between the two organisms. *B typhosus* is more motile, and possesses several flagella which are easily stained. *B coli* has only one flagellum which is stained with difficulty. *B coli* gives the indol reaction—*B typhosus* does not. The latter has a great tendency to form filaments by the connection of several individuals. *B coli* forms more rapidly on agar and gelatin than the typhoid bacillus.

[Since Rovet and Roux published the results of their investigation in which they advanced the idea that these two bacteria were identical, the REPORTER has endeavored to give a *resumé* of the work done on these two organisms to affirm or refute their conclusions. The importance of positively identifying these forms render the consideration of all facts bearing upon this point unusually interesting. The statement of Fremlin in reference to the morphology of the two organisms has been shown to differ from the results stated. Moore found that the flagella stained quite as easily in one species as the other. He also found that the number were nearly as great. More recently Bunge (*Fortschrette der Med.*, Nov., 1894) confirms Moore's results. The difference in the gas producing power of this organism as determined by Smith is also omitted. It is interesting to note, however, the difference in the tendencies between the French and German investigators in reference to the identity of the two organisms.—ED.]

THE MORPHOLOGY OF BACTERIA WITH SPECIAL REFERENCE TO THE BACILLI OF ANTHRAX, TUBERCULOSIS AND DIPHTHERIA.

The investigations that are being made with reference to the identity of the bacillus of typhoid fever and *bacillus coli* renders all work bearing upon the morphology and especially the polytypes of pathogenic bacteria a matter of considerable interest. Recently Klein (*The Quarterly Journal of Microscopical Science*, 1894, vol. 36) has published the results of his observations on the morphology of the three species of bacteria in question, from which he concludes that they are not typical bacilli as they are usually represented to be. He finds that while under many conditions their morphological characters are those of typical bacilli, under other conditions they are not, but revert to or assume forms indicating their relationship to saccharomyces or to still higher mycelial fungi. With regard to the bacillus of diphtheria the author points out that the club-shaped expansions of one or both ends are not to be regarded as due to involution, for both under natural and artificial conditions where there is active growth, these expansions will be found, and have moreover, a striking resemblance to the ends of growing hyphæ. Their existence therefore is to be explained by their representing a relationship to a mycelial fungus. For the other two species he shows in a somewhat similar way their relation to higher fungi.

[The fact is well known that many eminent bacteriologists consider certain pathogenic bacteria to have sprung from forms not supposed to be pathogenic, but the conclusions of Klein in which he attributes the most characteristic morphological characters of these bacteria to analistic stages found in higher fungi will undoubtedly meet with much adverse criticism.—Ed.]

NEW METHOD FOR STAINING TUBERCLE BACILLI.

Leutelle (*Bull.-Soc. Belged de Mic.*, xx, p. 184) recommends a somewhat new process for staining tubercle bacilli in any condition of tissue or in cover-glass preparations. The preparations are to be immersed for one to twenty-four hours in carbol-rubin and then transferred to a 1.5 per cent. solution of permanganate of potash. This is followed by immersion in a saturated, aqueous, freshly prepared solution of sulphuric acid. The preparations are then washed in water, after which they may, if desired, be double-stained with saturated aqueous solution of methylineblue. In this case the sections are washed, dehydrated in alcohol, cleared in xylol and mounted in balsam.

STAINING MICRO-ORGANISMS IN THE BLOOD.

Vincint (*Gaz. Med. de Paris*, 1894, p. 296) recommends the following method for staining micro-organisms in the blood. The cover-glass preparation is prepared in the usual manner. After which it is treated for 1 to 2 minutes in the appended solution: 5 per cent. carbolic acid 6 cc.; saturated salt solution 30 cc.; glycerine 30 cc; the solution is to be filtered before using. This fluid dissolves the hæmaglobin, does not alter the shape of the red corpuscles and causes no precipitate. The fluid is drained off, the preparation washed in water, is counter-stained in carbol-methyline-blue plus ½ per cent. aqueous methyl-violet solution. This method is mentioned as a good process for demonstrating the malarial plasmodia.

THE DEMONSTRATION OF INFLUENZA BACILLI.

Borchardt (*Berlin Klin. Wochenschrift*, No. 2, 1894) records his experience with Pfeiffer's influenza bacillus which he found in thirty-five out of fifty cases examined. He lays much stress on the observance of the method used by Pfeiffer. The bacilli are demonstrated in the sputum which must be fresh and washed with sterile water. Cover-glass preparations are then made from the central portions of the lumps of sputa and stained with carbol-fuchsin 1 to 10, after which they are washed in water or decolorized in dilute acetic acid. The bacilli are observed free and often in pure preparations but usually other bacteria are present. The influenza bacilli sometimes appeared within the cells, and again in little clumps or swarms.

The influenza bacilli may be demonstrated in the sputum for at least a week during the course of the disease. As they do not react constantly to staining reagents the microscopical examination does not always succeed, especially when from polar staining they resemble diplococci. Cultivations are sometimes unsatisfactory. Cultures are best made by washing a mass of sputum in sterile water and placing it in a tube of bouillon and throughly mixed, from which tubes of inclined agar or agar containing blood can be inoculated. Although these cultures are impure usually, the influenza bacilli form small, clear, homogeneous, structureless colonies by which they can as readily be distingushed from those of the other bacteria.

CORRESPONDENCE.

CIRCUMCISION.

EDITOR MEDICAL AND SURGICAL REPORTER:

DEAR SIR: I notice in THE REPORTER of February 9, 1895, page 218, an editorial on Circumcision, which you reprint from the *Medical Record*. To allow this editorial to go unchallenged would be doing mankind in general a great injustice, unless its author wishes to confine his remarks to a very much shortened and retractable prepuce.

Circumcision may be a relic of barbarbous and semi-civilized times, but we cannot deny it many advantages.

The removal of the prepuce serves as many useful purposes at the present time, as it did among the nomadic tribes of tropical countries. We have no assurance when a child is born that its habits will be sanitary to any degree whatever.

It is a fact that syphilis and gonorrhea are less prevalent among men who do not have prepuces than those who possess them.

Any man in the practice of medicine should know that it is not necessary to remove the prepuce if it does not cover more than one-third of the glands and can be retracted with ease beyond the corona, unless it should be eczematous or otherwise diseased.

A personal experience with two hundred and twenty-five circumcisions leads me to say that it is one of the most valuable of operations, and that I would, without hesitation, advise its general adoption.

I am very truly,

MERRILL RICKETTS.

Cincinnati, O., Feb. 14, 1895.

EDITOR MEDICAL AND SURGICAL REPORTER.

DEAR DOCTOR; I should be greatly obliged for any information that may be sent me personally or through your columns, regarding the efficacy to the salol and potassium iodid tests for gastric motility and absorption, respectively. Information is particularly desired with regard to cancer, ulcer and other serious troubles. Due credit will be given for any such information, providing the results of my study are published.

Very truly yours,

A. L. BENEDICT.

174 Franklin St.,
Buffalo, Feb. 12, 1895.

THE MEDICAL AND SURGICAL REPORTER

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SATURDAY, FEBRUARY 23, 1895.

EDITORIAL.

AN OVERCROWDED PROFESSION—THE DEMAND FOR PHYSICIANS.

Last week we considered the medical profession and the opportunities of its members from the purely business standpoint of demand and supply. In this issue, we purpose to discuss in greater detail the demand.

The student of medical history is struck with this important difference between the physicians of almost all the nations of antiquity and of the middle ages, and those of our own century. The former, though, on the whole, occupying a lower social level, seem to have been less dependent on their practice, and, in their purely medical capacity, appear to have exercised a greater influence on their patients. A slave, a half-educated priest, an itinerant quack, attained reputations unknown in our days, received large fees, and were sought after by such crowds of people as, in these degenerate times, even the free dispensaries fail to attract. It may be that the accounts of the past are exaggerated, that the fortunate ones of whom we read were the exceptions; at any rate, we know that the attainment of even the moderate success which is possible in modern times, is an extremely difficult matter.

What are the sources of the demand for a profession to minister to the sick; and has there been any material change in this demand during recent times?

With the development of an highly artificial state of living, sickness increases up to that time when the need of exercise and the systematic attention to such various sanitary details as sewerage, plumbing, heating and ventilation, cleaning of streets and removal of garbage, is recognized. Within the last ten years, a tremendous advance has been made along these lines. Physical culture (using the word in no limited sense) has become fashionable. The free use of intoxicants, of tobacco and similar articles, the overindulgence of any of the appetites are frowned down by the very classes of so-

ciety which formerly fostered these vices. There has been a great increase in the spread of popular knowledge within recent years, and public sentiment now demands attention to hygienic details which would have been ridiculed or denounced as an infringement of individual rights, a decade ago. We are just at the beginning of the municipal use of expert bacteriological and chemical skill for the preventing of disease; yet the diminution already apparent, is great. Twenty years ago, small-pox was a not uncommon occurrence in general practice. Now, there are thousands of well-educated and experienced physicians who have never seen a case. Diphtheria, scarlet fever, cerebro-spinal meningitis were epidemic, almost endemic in many cities where they are now seen in scattered cases throughout certain months of the year. All these facts, gratifying as they may be to every right thinking physician, indicate a lessened demand for his services. Wholesale medicine has supplanted the retail efforts of the family doctor in the domain of sanitary science.

Children are born into the world, and the sentiment in favor of the obstetrician as against the midwife, professional or amateur, is growing. But it is noticeable in every highly civilized country that well-to-do families are producing fewer children; the births predominating among that class of the community which depends upon medical charity.

It is unnecessary to more than allude to the medical pauperizing of a large class of a community, particularly in cities, by hospitals, dispensaries and the like. The evil has not been exaggerated, and we can add but one new thought on the subject; namely, that the growth of such institutions is not only the cause of a relative poverty of medical men, but is the result of the overcrowding which drives physicians to expend their superfluous energy in charity work, with the hope that the experience or prestige of such occupation may lead ultimately to something better. Surgery in general practice has been almost wiped out of existence by emergency hospitals. Indeed, if a man of means fell unconscious within a block of his own home, the chances are that he would be conveyed to a hospital miles away before his friends could learn of his misfortune. Railroad companies are awakening to the fact that they can get a good share of their surgical service for nothing, and many have already contracted with emergency hospitals at rates which are only a fraction of what they willing paid years ago. Medical charity is thrust in the face of the community and, with increasing expense of living in cities, it is only the most honorable who will pay for medical service.

The diminution of infectious diseases, the inroads of free institutions, the observance of sanitary laws, the increase of poverty, all tend to lessen the demand for physicians' services. We should consider it a fair estimate to say that a ratio of one doctor to six hundred of the population now would be about equivalent to one to four hundred ten years ago. In other words, there should be no greater annual addition to the ranks of the profession now than when the population of the country was considerably smaller. This statement naturally leads to the consideration of the supply of physicians by medical schools, a subject which must be passed over at present.

It would seem that the demand for medical men might be increased by extending the domain of the medical profession. Graduates in law, for example, include real estate dealers, business men of all kinds and politicians beside the judicial and pleading branches of the legal profession proper. To a certain extent, the creation of boards of health, the appointment of municipal and state bacteriologists, chemists, etc., the

maintainance of insane asylums, almshouses, etc., do open new fields of usefulness to our profession, but, as a rule, medical men acting in the capacity of public servants are not well compensated, especially when comparison is made with the purely political office holders; and as has already been intimated, one man acting with the support of public office, indirectly removes the necessity of ten general practitioners.

We are not to be included in the category of those mercenary physicians who lament the occurrence of "healthy weather," or who complain, as one old man did to us some years ago, that "there has not been an epidemic for a long time." It is a great blessing that the earnest efforts of the profession for preventive medicine are beginning to bear fruit. There will always be a need not only for sanitary and hygienic advisors, but for an actual ministering profession. We need have no fear of the abolition of medical practice, but we must recognize the fact that fewer men will do the work of the coming generation, or else the remuneration of the average physician must suffer such diminution that he will be reduced to poverty if he has no means outside of his professional earnings.

ABSTRACTS.

THE DOCTORS OF NEW YORK REGIMENTS IN BROOKLYN.

It is always a hardship for men to be taken away from their business for the purpose of doing military or jury duty, and the service required during the recent strike in Brooklyn of a large part of the National Guard resident in the city of New York was an unusual hardship, for the weather was uncommonly trying, the men were badly housed and fed, a great share of what they did was in the line of police duty rather than military service, and they were almost constantly exposed to the missiles of concealed foes. Yet there was next to nothing from them in the way of complaint, even in private. They did there work manfully, indeed heroically.

Among these men there were members of our pofession, men who could ill afford the interruption of their practice that had to be submitted to. People are notoriously impatient and unreasonable when anything interferes with their obtaining their own doctor's attendance without delay, and we can well imagine the unamiable and captious remarks that must have been made in many a family during the week that a number of New York doctors were obliged to stay in Brooklyn. Moreover, there must have been in many instances a serious break in the continuity of a line of treatment that had been laid out. The doctors that we have in mind were not only the medical officers of the various commands, but also a very considerable number of physicians in the ranks. This was fortunate for the efficient prosecution of the medical service, for the regiments were for the most part in scattered detachments, and the medical privates were available for detail to medical duty. A number of doctors were thus made more useful than they could have been had they remained in the ranks, but that fact did not abate the chagrin they must have felt at an unnecessary sacrifice of their own interests. But there was no complaint on the part of these doctors, whether regimental officers or privates. They all did their duty faithfully, efficiently, and cheerfully, and they are deserving of the highest praise. The National Guard is certainly to be congratulated on the character of its medical men.
—*New York Medical Journal.*

Evaporating Lotion:

Ammon chlorid	℥i
Sp rectificati	℥ii
Sp etheris	℥i
Ac acetic	℥iss
Aq destillat	ad ℥xii

To be applied on lint in severe sprains.
—*Pharmacopeia of Royal Infirmary.*

A NEW TREATMENT FOR TUBERCULOSIS.

For many months Dr. Paul Paquin, of St. Louis, has been experimenting with a remedy for tuberculosis. His conclusions were recently presented to the St. Louis Medical Society in a demonstrative manner. There can be but little doubt that Dr. Paquin has discovered nature's own treatment for tuberculosis. It is, perhaps, not saying to much to state that he has discovered a cure for that dreadful list of maladies to which the name tubercular has been applied. He employs the serum therapy, using the serum of the horse, an animal which rarely, if ever, contracts tuberculosis. In a large number of patients in the city hospital and poor house, upon whom the new treatment was tried, a gain in weight, a diminution and cessation of expectoration, a fall in temperature and, in fact, an amelioration of all symptoms was obtained.

Dr. Paquin presented the clinical histories of twenty-two cases treated with almost uninterrupted improvement. Nearly every case had gained in weight. Cough had entirely disappeared in patients with large cavities. The serum is obtained from horses rendered strongly refractory to the germ of tuberculosis by laborious processes. A remarkable feature in the result of the treatment was that not one of the seven cases which Dr. Paquin presented to the society coughed once during the entire evening. This, too, was after exposure to a cold wind on a very bad night. Dr. Paquin did not present conclusions with regard to his experiments, but expressed the opinion that the immunized horse-serum would soon be the natural agent to prevent and treat tuberculosis. He said that it was obviously too early to reach reliable conclusions, although the results seemed sufficient to justify the hope that the serum would arrest tuberculosis.

The results obtained by Dr. Paquin were confirmed by Dr. George W. Cale, a skilled bacteriologist and able surgeon. Dr. Cale believes that in the serun therapy we have a remedy of the greatest importance for bone and joint tuberculosis.

The preparation of the serum is expensive and requires minute attention to details. The filtration of the serum is a matter of the greatest importance, and in this Dr. Paquin was assisted by Dr. Given Campbell, who discovered a method of filtration superior to any heretofore in use.

It is worthy of note that the three gentlemen whose names have been mentioned above are young men, exponents of that scientific school of medicine of which Pasteur, Koch, Kitasato, Roux and Behring are leaders. It should also be remarked that they are ethical gentlemen who are not seeking notoriety. Unlike many of the older men of St. Louis, particularly the surgeons, they are peaceful citizens.—*Ed. Med. Fortnightly.*

DIPHTHERIA ANTITOXIN—SERUM THERAPY IN DIPHTHERIA.

The most interesting and important contribution to the recent Congress at Budapest was the report of M. Roux upon the serum therapy of diphtheria. The investigations cover a period of over three years and were carried on at the Pasteur Institute and the Hôpital des Enfants-Malades, with the assistance of MM. Martin and Chaillou.

BACTERIOLOGICAL AND EXPERIMENTAL WORK ON ANIMALS.

The process of obtaining an antitoxic serum is briefly this: by prolonged cultivation of virulent diphtheria bacilli in a specially prepared bouillon at a temperature of 37° C., with exposure to sterile air, a concentrated toxin is obtained in about three weeks, of such a strength that one-tenth of a cubic centimeter will kill a 500 gm. guinea-pig in forty-eight hours. After filtration this toxin is kept in tightly closed flasks away from the light. For the purpose of immunization this toxin is diluted with one-third of its volume of Gram's solution. While immunization was obtained in several species of animals, the horse was chosen as furnishing a

larger amount of serum with greater ease, and one which of itself causes the least disturbance when injected into other animals. By injecting repeated and gradually increased doses of the toxin, a horse is rendered immune, that is, able to receive 250 c.c. of pure toxin without disturbance, in two months and twenty days.

The serum from such an animal when added to the diphtheria toxin makes it inoffensive, and the mixture injected into animals causes no disturbance even of a local nature. The mixture may be made equally well in the animal's system. The serum, whether given before, with, or after the injection of the toxin, enables an animal to endure an otherwise absolutely fatal dose of toxin. It appears from experiments which we cannot here detail that the protective influence of the serum is not exercised by destroying the toxin but by stimulating or in some way affecting the tissue-cells so that they do not respond to the poison. If the tissues have been vitiated, as by the toxin of the streptococcus, they are not responsive to the serum, and the action of the diphtheria toxin is only delayed. The dose of the serum varies with the weight of the animal, the doses of the toxin and the relative time of administration.

Most of the experiments with serum were made under the skin, but a considerable series were made upon the mucous membranes, which were of especial interest for the clinician, as they gave an opportunity to study the action of the serum on the diphtheria of an external surface. Diphtheria was caused in female guinea-pigs by excoriating the mucous surfaces of the vulvæ and thereafter rubbing them with the pure culture of diphtheria bacilli. The character of the inflammation and the structure of the membrane thus caused is in every way similar to that in children. The guinea-pigs, who otherwise invariably died, recovered without exception if the serum was injected in a sufficient dose before the inoculation of the mucous membrane. In all these cases a false membrane is formed, but the redness is less extensive, the tissues less swollen and the fever less intense. After the second day the local lesions diminish, the false membranes become detached and repair sets in. Guinea-pigs of equal weight with the same virus, but not treated with the serum, died in six days. The protected animals received one-ten-thousandth of their weight of serum. The result was in every case the same if the serum was injected at the same time with the inoculation of toxin.

In a second series of cases the serum was injected after inoculation; the false membrane had already been developed for about twelve hours; the redness and swelling were very marked. If at this time the serum is injected in a dose of from one to ten thousandths of the weight of the animal, it recovers without exception. In a few hours the edema ceases, and on the second day the false membrane becomes detached. After the repair of the mucous membrane no diphtheria bacilli were found. The rapidity with which the false membranes were cast off was remarkable. Unprotected animals died on the fifth or sixth day.

The third series of cases was undertaken upon guinea-pigs and rabbits inoculated in the trachea. The guinea-pigs thus treated died, usually in three days, if not protected. The pathological appearances were in every way similar to those in children. When inoculated in the trachea after having received the serum treatment, they did not take diphtheria. If the quantity of serum was not sufficient the disease, however, made its disappearance after a short delay. The animals injected with toxin after serum treatment gave no evidence at all of the disease.

In cases of diphtheria associated with streptococci infection the serum only rarely brought about a cure; not that there was a larger amount of diphtheria toxin or that the antitoxic power of the serum was annulled, but because the cells depressed by the poison of the streptococci no longer responded to the stimulation of the serum. No better results were obtained in treating animals previously vaccinated against the streptococci; possibly the serum of the rabbits was not sufficiently effective against the variety of streptococci which was used.

CLINICAL OBSERVATION AND RESULTS IN CHILDREN.

After this long and careful experimentation the authors were prepared to apply their results to the treatment of diphtheria in children, which was done in the diphtheria ward of the Hôpital des En-

fants Malades. Treatment was begun on the first of February, 1894, and continued until July 24th, thus covering the winter months in which diphtheria is the most prevalent and severe, and the summer period when the disease is notably rare. The wards were visited each day, and all children found there were treated, whatever their condition. No discrimination was made, so that the results of several months' treatment could be fairly compared with previous times. No change was made in the other care of the sick. The local treatment remained the same (cleansing with solutions of boric acid); the serum was the only new element introduced.

During the years 1890, 1891, 1892 and 1893, when no serum was used, the hospital treated 3,971 children, with a mortality of from 47.64 per cent to 58.8 per cent. an average of 51.71 per cent. From February 1st to July 24th this year, there were 448 admissions and 109 deaths, a mortality of only 24.5 per cent. That this improvement was not due to a mild form of the disease this year is shown by the statistics of the diphtheria ward of the Trousseau Hospital, which admitted during the months of February, March, April, May and June this year 520 children. None of these patients received serum treatment, and the mortality was 60 per cent.

Operative cases have previously given an average mortality of 73.19 per cent. From February to July this year the mortality was only 49 per cent. under serum therapy. During the same period at the Trousseau Hospital, without the use of serum, the mortality of operated cases was 86 per cent. Of the 448 cases treated, 128 were found on bacteriological examination not to have diphtheria, and 20 died immediately on entrance, without receiving serum treatment. Of the other 300 cases of true diphtheria, 78 died, a mortality of 26 per cent. In 65 cases guinea-pigs were inoculated with bacilli from the membranes; 60 of them died within 30 hours, and three within a week, two only recovering.

Every child at entrance was given 20 c.c. of the serum in a single injection, under the skin of the flank. If bacteriological examination showed that the patient did not have diphtheria, the injection was not repeated. The injections made into the subcutaneous tissues were not painful, and in a few moments the serum was absorbed. In the great majority of cases there was no local reaction, and only where strict antiseptic precautions were neglected. In only three cases did an abscess occur, which healed rapidly after incision. In cases of true diphtheria, 24 hours after the first injection a second was given of from 10 to 20 c.c., which was usually sufficient to bring the case to a cure. The pulse and temperature were taken as a guide. If these remained elevated a third injection was given. The average weight of the children treated was 14 kilos, so that at the first injection they received a little more than a thousandth of their weight in serum. The minimum quantity of serum employed in any case was 20 c.c., the maximum 125 c.c. During the convalescence, some days after the injection of serum, an eruption resembling urticaria was occasionally noticed.

The general condition of the children treated by serum rapidly improved, provided the disease was not too far advanced. The appearance of most of the children was entirely altered from previous years. They are not pale and livid, but their color is bright and they appear gay and interested. The appetite quickly returns, and there is but slight loss of flesh. Their stay in the hospital is notably shortened.

The effect of the serum on the local lesion is most marked; within 24 hours the false membranes cease to extend, and within 48 hours they become detached, always by the third day; in seven cases only did they last longer. Bacilli disappeared from the throat at the same time with the false membranes, cultures ceasing to give colonies of the Klebs-Löffler bacillus by the third or fifth day.

The temperature rapidly falls under the action of the serum; in the less severe cases the decline often occurs the day after the first injection, and is scarcely noticeable after the second day. The fall is often so sudden as to be represented by a vertical line upon the temperature chart, as if the disease had been arrested at one blow. In the severe cases the defervescence does not begin until after the second or third dose, but then falls by a rapid lysis.

The pulse varied from 120 in the benign

to 140 in the severe cases, and was more slowly affected by the serum than was the temperature, frequently remaining high after the fever had ceased, and never reaching a normal rate before the temperature. After treatment by serum the pulse was never observed to have the irregularity during convalescence which was so frequent in former times.

Persistent and abundant albumen in the urine was noted only in certain of the most severe cases, and there is little doubt that the serum prevents the action of the toxin upon the kidneys and lessens to a large extent the number of cases.

The accidents consecutive to diphtheria are much rarer among those treated by serum. There were a few cases of paralysis of the palate of short duration, one case of paralysis of an inferior limb, and one of general paralysis in a child nine years old, who entered on the sixth day of the disease. The paralysis appeared three weeks after recovery, and the child died of asphyxia while eating a biscuit. Three children died of syncope—two within 26 hours of entrance, and one, who had had measles, on the third day.

From these experiences there seems little doubt that every case of pure anginal diphtheria will recover if treated in season with immunized serum.

The results in mixed cases were similar to those in animals. Cases of diphtheria associated with the staphylococcus pyogenes are more severe, but all the five cases observed recovered after a longer period. The amount of serum used varied from 30 to 50 c. c. The association with the streptococcus gave rise to the gravest cases, of which there were 35 with 12 deaths (34.2 per cent.) Omitting four who died within 24 hours of entrance there was a mortality of but 25.8 per cent. The duration of these cases was the longest, the children who recovered being at least 15 days in the hospital. Under the use of serum the general symptoms were notably less severe, the pallor of the face less, the false membranes became detached more easily, and the swollen glands ceased to increase after a sufficient injection. In these cases the serum did not bring the rapid fall of temperature noticed in true diphtheria. In case the disease is to terminate favorably, the pulse falls within the first two days to 120, and remains at that rate for a considerable time.

The statistics of the operated cases, the details of which we cannot give here, point strongly to the conclusion that in cases of laryngeal obstruction operation should be delayed as long as possible after giving the serum. During the period of serum treatment only 40 per cent. of the cases came to operation, as compared with 50 per cent. or over in previous years; but of these 121 cases, 102 were operated before the injection of serum, or within 12 hours of the first dose; 14 between the 12th and 36th hour after the beginning of treatment; and but five more than 36 hours after receiving the antitoxin. It is impossible to say how many of these would have escaped tracheotomy if the serum had been administered sooner, but there is no doubt that with the serum treatment, tracheotomy should in a large majority of cases be replaced by intubation. If the imminent danger of suffocation can be thus relieved for one or two days, there is little doubt that sufficient time will be gained to obtain a cure by means of the serum.

The local treatment in connection with the serum therapy should be of the simplest nature. No swabbings or paintings with caustics or carbolic acid or corrosive sublimate. A douche or boric acid solution to the liter or boiled water, two or three times a day, is quite sufficient.

In concluding, Mr. Roux said that they were convinced that with better means of isolation than existed at the Paris hospital the mortality could be still further reduced.—*Boston Med. and Surg. Journal.*

For Blepharitis

Millendorf recommends, (*Col. and Clin. Rec.*)

℞ Red oxide of mercury..... gr x
Vaseline..... f ʒ ss
Sig. Apply to the edge of lid at bedtime.

Or,

℞ Ammoniated mercury..... gr xx
Powdered camphor..... gr x
Vaseline..... f ʒ ss
Sig. Apply at night.

Or,

℞ Solution of subacetate of lead.... gtt x
Ointment of rose-water..... ʒ iij
Sig. To be used for the more chronic forms of marginal blepharitis.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Where Our Drugs Come From.

"Principal Exports to the United States" is the title of a pamphlet lately issued by the State Department, which is of especial interest from the fact that it gives the value of our imports and the names of the products and the countries from which they are derived. The report is compiled from the reports of the various consuls of this country, and the figures bearing upon the extent of the drug and chemical imports are interesting both on account of the magnitude of the commercial interests involved in the trade and the fact that they show that the most remote portions of the earth are called upon to supply our demand for drugs and medicines. The figures given, with a few exceptions, cover the calendar year 1892, and the report is arranged to show the value of goods as "declared for export" in the various consular districts. From the Buda-Pesth and Vienna districts of Austria-Hungary we receive drugs and chemicals amounting to $122,758. From Trieste insect powder and flowers amounting to $71,884. From France our imports include olive oil, drugs, chemicals, argols, dyestuffs, toilet articles and perfumery, and amounted to $2,564,000. Germany furnished us with drugs, chemicals, dyes, colors and essential oils to the amount of $9,193,849. Greece sent us $24,108 worth of sponges. From Italy we received olive oil, brimstone, canary seed, crude glycerine, soap, argols, orris root, almonds, licorice, sumac and essential oils, valued at $4,909,704. The Netherlands sent us cacao butter, drugs and dyestuffs amounting to $366,470. Corkwood worth $1,069,057 and argols worth $131,805 came from Portugal. The Batoum district, Russia, furnished us licorice root valued at $624,363. Spain furnished us cream of tartar, glycerine, licorice, saffron, corkwood, olive oil and canary seed worth $1,505,505. Sweden and Norway sent us $82,055 worth of cod-liver oil and oxalic acid worth $18,090. Little Switzerland sent us anilines, dyestuffs and chemicals worth $139,518, and enough argols and beef extract to make the total $475,760. We received from Turkey in Europe $403,013; attar of roses, $141,929; gum tragacanth, $55,620. From the United Kingdom, which seems to be a sort of clearing-house for the world, we received drugs and chemicals amounting to $12,570,180. British North America sent us $22,003 worth of senega root and $12,664 worth of sulphur. Sarsaparilla worth $67,577; vanilla, $710,580; fustic, $130,913; gum chicle, $475,665; and silver dollars, which are apparently a drug on the market, to the amount of $454,031, came to us from Mexico. China furnished cassia, $164,497; gall nuts, $5,730; and rhubarb, $16,454. Dutch India, gum damar, $64,729; gum copal, $30,452; cassia, $26,593. Japan, sulphur, $226,025; menthol, $23,391; camphor, $522,152. Philippine Islands, indigo, $16,369; ylang ylang oil, $10,002. Turkey in Asia, licorice root, $1,023,710; opium, $451,431. New Zealand, kauri gum, $1,997,607. Tahiti (Society Islands), vanilla, $36,698. Honduras, sarsaparilla, $30,951; chicle, $4,604. Brazil, copaiba, $28,958; guarana, $8,078; castor beans, $22,774. Chili, nitrate of soda, $2,880,643; iodine, $579,313. Peru, coca leaves and elixir, $5,329. British West Indies, sponges, $236,555; dyewoods, $186,842; ginger, $40,734; pimento, 126,400. Dutch West Indies (Curacao), aloes, $3,047. Guadeloupe, vanilla, $1,660. San Domingo, dyewoods, $38,307. Porto Rico, bay rum and oil, $3,494. Canary Islands, cochineal, $17,382; almonds, $3,877. British Africa, argols, $10,088; palm oil, $1,892. Egypt, senna, $36,627. Algiers, corkwood, $22,159. Morocco, canary, cumin and coriander seeds, $4,735. Zanzibar, cloves, $289,688; clove stems, $4,058; gum copal, $51,886. British Asia, Aden, civet, $4,898. Culcutta, drugs, $4,272,076; saltpeter, $518,845. Ceylon, cocoanut oil, $937,331; cinchona, $73,185; essential oils, $73,015. Hong Kong, opium, prepared, $543,091; cassia, $79,170; medicines, $51,418. Singapore, gambier, $733,855; gum copal, $119,493.—*Pharmaceutical Era.*

Thioform as a Substitute for Iodoform.

Dr. Julius Schmidt states that thioform is a grayish-yellow powder, which is a chemical combination of bismuth, sulphur and salicylic acid. It is tasteless and odorless, insoluable, and was first prepared as a substitute for iodoform. This expectation has been verified in so far that surgically its value is equally great, but the specific of iodine, as required in tuberculous affections, is not obtained. When applied to fresh wounds thioform produces a rapid drying of the surface, leading to a more rapid cicatrization than has been observed after the use of any other application. This was noticed even in extensive surface lesions, such as burns, weeping eczema and gangrenous patches, the latter having healed in four days. The author tested the powder in five cases of ulcer of the leg, which had resisted other treatment. The ulcer having been cleaned and disinfected, the thioform was thickly dusted over it, and covered with cotton-wool and a bandage. Every fourth day the whole dressing was changed, and though the patient continued to walk during the treatment, the cure required two or three weeks only. Some pain was occasionally produced, but no sign of irritation could be seen. Similar results in the practice of other surgeons are given. Finally, the author used thioform internally

after having satisfied himself as to its non-poisonous character, and with daily long-continued doses of fifteen grains, better, though similar, results were obtained than with salicylate of bismuth.—*Medical Record.*

Management of Eczema.

Dr. Malcolm Morris thinks that, as a general rule, the less internal remedies we use the better, but that if a constitutional dyscrasia be recognized it must, of course, receive appropriate treatment. When the skin lesions are acutely inflammatory the use of antimony seems beneficial, and the author gives ten or twelve minims of wine of antimony, repeating the dose in an hour, and, if necessary, in two more. Gradually the interval is increased and the dose lessened until six minims are given three times daily, and this is continued until the inflammation subsides. Arterial tension is an indication for the use of this drug, and depression a positive contra-indication. Deficient strength and nerve force may call for strychnia, arsenic, belladonna, phosphorus, quinine, etc., but the author thinks diet has only an indirect influence, through its effect on digestion, the general health, etc.—*Pacific Med. Jour.*

Cause of Death in Skin Burns.

Kianicine (*International Med. Mag.*) has made some experiments to determine the presence of a ptomaine in the blood of animals affected with burns of large extent. In thirty-five experiments the ptomaines were found both in the blood and in the organs, while the blood of healthy animals, prepared in identically the same manner, did not contain this ptomaine. The method of Stas-Otto was employed in the same manner as is done by Brieger for preparing the peptotoxine. Extraction is accomplished at a temperature of 80° C. (176° F.), with alcohol, evaporation, and the digestion of the remainder with amyl alcohol. Next, evaporation to dryness, dissolving the product in water, and purification by means of the subacetate of lead, by the use of sulphurretted hydrogen; and finally a purification by means of ether. This poison develops only in animals burned or scalded, and is not a product of chemical manipulation. Some special reactions are given for it in the paper.

Lactophenin.

Lactophenin is phenacetin: in the group, acetyl is replaced by the group lactyl. It is white fine crystalline powder, with an agreeable bitter taste, soluble in 330 parts of water. Dosage: 0·6 gramme, three times a day. The maximal dose is 1 gram three times daily. It acts as an analgesic in neuralgia, and in full doses as a hypnotic. It gradually reduces temperature, which remains low for a long time. In typhus fever it calms the excitement, stops delirium, and produces sleep, and in typhoid is credited with cutting short the fever.—*Les Nouveaux Remedes.*

Methyl-Blue and Epithelioma.

Dr. Darier, in a communication to the Academy of Medicine of Paris, reports the success of Dr. Mosetig, of Vienna, with the methyl-blue treatment of cancers, though M. Dentu has not with methyl-blue obtained cures. The author relates a series of cancerous tumors of the face cured rapidly by the daily application of a twenty per cent. solution of the drug. He considers the drug to have a specific action on cancer. A daily touching of the sore with the solution will effect a cure; but the good result will be more quickly produced by cauterising the carcinoma with chromic acid or the galvano-cautery. For deep-seated carcinoma he recommends the solution to be hypodermically injected. Tumors whose surface is broken should be covered by a healthy skin-flap on or about the fifteenth or twentieth day after treatment commenced. Dr. Darier presented to the academy a patient who had had epithelioma of the left eye, and was then quite free of the disease, its site being marked by a cicatrix. This was the ninth case the doctor had thus treated, and with success in all.—*Les Nouveaux Remedes.*

Mechano-Therapy in Chronic Diseases of the Heart.

In the *Practitioner*, Eccles writes an article on this subject. He believes the rationale of the treatment of certain chronic diseases of the heart, by a combination of rest, massage, assisted and resisted exercise, followed by outdoor walking carefully graduated, is based upon,—

1. The rest afforded to the overstrained or enfeebled heart by the adoption of the recumbent position for a time.
2. The aid given to the circulation by the mechanical centripetal pressure exercised on the limbs and trunks by massage.
3. The more rapid oxygenation induced by the acceleration of the circulation, and the diminution of peripheral resistance by the same means.
4. The improvement in general nutrition, the elimination of waste products, and the increased metabolism induced by the passive and active exercises in and out of doors.
5. The careful preparation and selection of suitable food, coupled with the aid to digestion afforded by abdominal massage and exercises acting directly on the walls of the abdomen, and exercising pressure on its contents.
6. The substitution of regular, graduated, assisted, and resisted movements for the spasmodic and ill-regulated exercise taken by patients suffering from cardiac functional disturbance, with or without organic lesion.

Enlarged Glands.

Iodoformi.....	ää 3i
Bals Peru.....	
Collodii.....	3i

Sig. To be painted over swellings every night.

GYNECOLOGY.

New and Speedy Method of Dilating a Rigid Os in Parturition.

At a meeting of the Obstetrical Society of London Dr. Farrar (Gainsborough) gave the details of two cases in which he had used a ten per cent. solution of cocaine as an application to the rigid os. In one case he had applied the cocaine after endeavoring vainly to relax the cervix by means of chloral, bromide of potassium and morphia and the most persistent attempts at digital and mechanical dilatation, with and without chloroform. He decided upon incising the os and used the cocaine to this end. After five minutes he introduced the finger as a guide to the scissors; and to his surprise found the os widely dilated. In the second case, a primipara, forty-eight years of age, he used every effort as before to produce relaxation, and waited three days before making the application of cocaine, which was immediately successful. In four minutes the os had yielded. He considered the dilatation to be due to the cocaine in both cases.

Dr. Armand Routh said that Dr. Dibbs, of Shankin, had recommended cocaine as relieving the pains of the first stage of labor, and that Mr. Head Moore advised cocaine and boric acid pessaries in cases of rigid os. He himself had found it useful.

The president, Dr. G. E. Herman, said that two cases were rather a slender foundation upon which to base a conclusion, but if Dr. Farrar's results were confirmed by further experience he would have made a valuable addition to our obstetric resources.—*The Lancet.*

Sugar in the Treatment of Uterine Inertia During Labor.

It remained for Mr. Bossi, of Genes (*Rev. Illust. Polytechnique Medicale*), to make practical application of a theory propounded by Drs. Paoletti and Mosso, that sugar taken internally might be found to exhibit as stimulating an effect upon the group of uterine muscles as it has on voluntary muscles. Bossi administered a dose corresponding to an ounce of sugar in about eight ounces of water. A most excellent effect was observed after the first dose in all but one of the cases, the ecbolic action showing itself in from twenty to forty minutes and nearly always lasting till the birth of the child. In the other case a second dose had to be given. The contractions were always quite regular and free from any tetanic tendency.

OBSTETRICS.

The Psychoses of the Climacteric Period.

Prof. P. J. Kowalewski, of Clarkow, in a recently published paper, "Menstruationszustand und die Menstruations Psychosen," says that during the climacterium insanity may appear in two forms: in the one, the course of the disease is periodical, and the attacks accompany the menstrual periods, or occur at the time when these periods are expected but do not appear; in the other, the psychosis has no direct connection with the menstruation, but seems intimately related to all the symptoms of the climacteric. The mental symptoms of these psychoses vary greatly. They may be characteristic of anxietas, melancholia, mania, amentia, or parnonia, etc. Although these symptoms are not especially characteristic, the influence of the climacteric may be easily recognized. Thus, the anxietas precordialis occurs in more or less regular attacks, corresponding to the time of the expected menstruation. The same may be said of the periodical exacerbations of hysterical and epileptic attacks. It is often found that at such times sudden changes in mood and character may develop without such symptoms being characteristic of either melancholia or mania. The melancholia of the climacteric period is especially met with in married women leading an unhappy domestic life, and is often accompanied by attemps at suicide. Sometimes the melancholia is of a hypochondriacal type; at other times it is associated with delusions of a religious character, persecutory ideas, or erotic hallucinations. Mania is a rather uncommon form of insanity during the climacteric, and is generally characterized by hallucinations, sexual excitement, violence, phantastic ideas and obscene behavior. It is usually met with in widows, old maids of not very high morals, and, generally speaking, in person with unsatisfied sexual cravings, or in such who have committed excesses in venery. Amentia does not often occur during this period in the maniacal form; more often in connection with the menstruation in the form of a periodical psychosis or as an uninterrupted attack, with exacerbation corresponding to the menstrual periods. It is often accompanied by an extreme erotism. Particularly characteristic of the climacteric period is paranoia, occurring mostly in old maids with a psycopathic predisposition. The morbid ideas of such persons are concentrated about men, who make love to them on every occasion. They finally accuse their persecutors of having made criminal assaults upon them. The patients believe that a certain man, who is often unknown to them, or may even be living in some other town, maintains marital relations with them. From being persecuted, the patients finally become persecutors, who torment their victims with letters, or even go so far as to make an open scandal of it. In some cases a perversion of the sexual instinct may show itself by persons of their own sex having an attraction for them. These persecutory ideas as regards the men, in which hypnotism, spiritualism, the telephone, etc., figure extensively, together with the sexual delusions and nymphonomaniacal symptoms, are so often met with in the climacteric period that this form may be considered the climacteric insanity *par excellence.—St. Petersburger medicinische Wochenschrift.*

PHYSIOLOGY.

The Resistance of Living and very Vascular Tissue to Gastric Digestion.

John Hunter, in 1772, pointed out the *Post-Mortem* digestion of the stomach and adjoining organs by the gastric juice. He attributed the resisting power of the living organ to "the living principle." In 1856, Pavy showed that the leg of a frog or the ear of a rabbit, introduced through a gastric fistula into the stomach of a dog, would be then digested. Pavy attributed self-preservative power of the living stamach walls to the presence of alkaline blood and lymph neutralising the acid gastric juice. By stopping the circulation at certain points he produced autodigestion of small areas. Claude Bernard thought the protection was due to the mucous coating, but Schiff observed a wound of the mucosa for six weeks, without softening or autodigestion of the deeper coats.

Gaglio injected gastric juice into the bladder of living rabbits, after ligation of the ureters, and no digestion occurred.

Gaspardi and Viola have detached the spleen from its usual position, and maintaining its vascular integrity, introduced it into the stomach through an artificial opening, and it has remained there as long as sixty-four hours undigested. But, as peritonitis had supervened, digestion may have been inactive.

Ch. Contelean (*Archiv. de Physiol., Norm. te Patholog.*), to test this further, has introduced loops of the animal's bowel into the gastric fistula. The animals have recovered, and lived more than five weeks. One dog, operated upon on the 27th of March, was killed on the 4th of May. Several small perforations of the loop of bowel were found, but the wounds had heated by the formation of a continuous epithelial coat between the mucosa of the stomach and intestine; and only at one small area was the intestinal muscle laid bare.

M. Contejean concludes that the stomach is preserved from autodigestion by the epithelium of the mucosa, and by the circulation maintaining the vitality of this epithelium. The epithelium acts, perhaps, by exercising a selective *role* in absorption, hindering, whilst living, the active principles of the gastric juice from penetrating into the depths of the walls of the stomach (experiment of Sehrwald.) When the epithelium is absent, the circulation of the blood sweeping away the digestive juice as the mucosa absorbs it, permits lesions of the walls to cicatrise, and clothe itself anew with a covering of indispensable epithelium. The importance of these observations in connection with operations upon the stomach and the treatment of gastric ulceration is evident.—*Glascow Med. jour.*

The Excitability of Rigid Muscles.

J. Tissot (*Archiv. de Physiol., Norm. et Patholog.*,) as a result of experiments, concludes that (1) cadaveric rigidity is a phenomenon not incompatible with the life of muscles, and its appearance is not a proof of death, that it can appear in living muscles which may remain excitable (electrically, mechanically, or chemically) for a long time afterwards; that (2) the vapour of chloroform acts as an excitant, and not as a coagulant of muscle; and that (3) the sensibility of muscles to certain chemical reagents persists after the appearance of rigidity and disappears last (except in the fœtus, where it has seemed to disappear sooner that mechanical excitability.) The fact that contractility might be demonstrated in muscle washed out with arterial blood even several hours after the appearance of rigor mortis has been long known, and affords support to the proposal recently made in America to resuscitate criminals who have been put to death by powerful currents of electricity.

Treatment of Migraine.

In the *Gazetta Medica di Roma*, the following formula is recommended in the treatment of migraine:

Citrate caffeine	gr. xx.
Phenacetine	gr. xxx.
White Sugar	gr. xv.

Sufficient for ten capsules.
One every three to four hours during the period of the attack.

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM JANUARY 27, 1895, TO FEBRUARY 16, 1895.

The extension of leave of absence on account of sickness, granted First Lieutenant Henry R. Stiles, Assistant Surgeon, is still further extended two months on surgeon's certificate of disability.

The extension of leave of absence granted Captain Reuben L. Robertson, Assistant Surgeon, is further extended fourteen days.

The leave of absence, on account of sickness, granted First Lieutenant James M. Kennedy, Assistant Surgeon, is extended one month, on account of sickness.

Lieutenant Colonel Henry R. Tilton, Deputy Surgeon General is announced as Medical Director, Headquarters Department of Dakota.

First Lieutenant Guy C. M. Godfrey, Assistant Surgeon, will proceed without delay from Fort D. A. Russell, Wyo, to Fort Omaha, Neb., and report for temporary duty.

Colonal Charles C. Cyrne, Assistant Surgeon General is relieved from duty as Medical Director Headquarters Department of the East.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE SIXTEEN DAYS ENDING JANUARY 31, 1895.

Austin H. W. Surgeon: To proceed to New Bedford, Mass., as Inspector, January 18, 1895.

MEETINGS OF STATE MEDICAL SOCIETIES FOR 1895.

Society.	Name and Address of Secretary.	Time and Place of Meeting.
Alabama	J. R. Jordan, Montgomery	April 16, Mobile
Arizona Territory	L. D. Dameson, Phœnix	February 5, Phœnix
Arkansas	L. P. Gibson, Little Rock	May 1, Little Rock
California	W. W. Kerr, San Francisco	April 16, San Francisco
Colorado	E. R. Axtell, Denver	June 18, Denver
Connecticut	N. E. Wordin, Bridgeport	May 22, Hartford
Delaware	W. C. Pierce, Wilmington	June 14, Wilmington
Florida	J. D. Fernandez, Jacksonville	April 16, Gainesville
Georgia	D. H. Howell, Atlanta	April 17, Savannah
Idaho	C. L Sweet, Boise City	September 9, Boise City
Illinois	J. B. Hamilton, Chicago	May 14, Springfield
Indiana	F. C. Woodburn, Indianapolis	May 30, Indianapolis
Iowa	J. W. Cokenower, Des Moines	April 17, Creston
Kansas	G. C. Purdue, Wichita	May —, Topeka
Kentucky	S eele Bailey, Stanford	June 5, Harrodsburg
Louisiana	P. B. McCutchon, New Orleans	May —, New Orleans
Maine	C. D. Smith, Portland	June 5, Portland
Maryland	J. T. Smith, Baltimore	April 26, Baltimore
Massachusetts	F. W. Goss, Boston	June 11, Boston
Michigan	C. W. Hitchcock, Detroit	June —, Bay City
Minnesota	C. B. Witherle, St. Paul	June 29, Duluth
Mississippi	H. H. Haralson, Forest	April 12, Jackson
Missouri	F. R. Fry, St. Louis	May 21, Hannibal
Montana	W. M. Bullard, Helena	April 16, Anaconda
Nebraska		
Nevada	W. A. Phillips, Reno	January 14, Reno
New Hampshire	G. P. Conn, Concord	May 30, Concord
New Jersey	Wm. Pierson, Orange	June 25, Cape May
New Mexico	F. H. Atkins, East Las Vegas	July 12, East Las Vegas
New York	E. D. Ferguson, Troy	October 16, New York
North Carolina	R. D. Jewett, Wilmington	May 14, Goldsboro
North Dakota	G. A. Carpenter, Fargo	May 25, Fargo
Ohio	T. Hubbard, Toledo	May 15, Columbus
Oklahoma Territory	C. D Arnold, El Reno	
Oregon	F. Canthorn, Portland	May 31, Portland
Pennsylvania	Wm. B. Atkinson, Philadelphia	May 21, Chambersburg
Rhode Island	W. R. White, Providence	June 6, Providence
South Carolina	W. Pyre Porcher, Charleston	April 14, Columbia
South Dakota	W. J. Mayturn, Alexandria	April —, Alexandria
Tennessee	S. S. Crockett, Nashville	April 9, Nashville
Texas	H. A. West, Galveston	April 23, Dallas
Vermont	D. C. Hawley, Burlington	October 10, Burlington
Virginia	L. B. Edwards, Richmond	
Washington	J. R. Thompson, Seattle	May —, Seattle
West Virginia	G. A. Aschinan, Wheeling	July —, Elkins
Wisconsin	C. S. Sheldon, Madison	May 3, Milwaukee

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ORIGINAL ARTICLES.

DYSMENORRHEA.

J. CAMPBELL, M.D., SEAFORTH, ONT.

I report a case of dysmenorrhea with anteflexion of the uterus and stenosis of the os internum, treated by rapid dilatation and applications to the endometrium; afterwards with galvanism, followed by a laparotomy with extirpation of both tubes and ovaries, and resulting in complete cure.

History.—Mrs. I. H., aged twenty-six years, married, came to my office on the 18th of February, 1892. She stated that she had been a sufferer at the menstrual periods ever since they began. She blamed a fall she had received when a little girl. She had been married five years, but so far from an amelioration taking place, she was growing worse as the years went by, so that her suffering had now reached an unbearable point. The pains were equal to labor pains in severity for twenty-four hours before the discharge began, and continued in a moderate degree all through the period, which lasted three or four days.

As a result of her suffering she was becoming morose and melancholy, and fear was entertained that some form of insanity might be the outcome at no late day.

Diagnosis.—Upon examination I found a well-marked case of anteflexion with stenosis of the inner os. Found no tenderness of uterus or ovaries, nor any sign of endometritis. She complained of the usual backache and headache of such cases during menstrual periods. The diagnosis was obstructive dysmenorrhea produced, as we thought, by the anteversion combined with the stenosis of the os internum, which was extremely sensitive upon attempting to pass the sound.

Treatment.—I decided to try what medicine and good hygienic measures would do. I prescribed Hayden's Viburnum Prunifolium compound and recommended fresh air and good diet, with moderate exercise.

The husband being somewhat impatient and desirous of early results, and I having mentioned incidentally that electricity would probably be beneficial in her case, he was anxious to have it tried.

Not having a galvanic battery at that time, I took my patient to the office of my friend, Dr. Turnbull, and had the os dilated by means of the negative electrode, the positive pole being placed over either the uterus or the sacrum. This was done three times with no diminution of the patient's suffering. The husband was so anxious that his wife's suffering should be relieved, that I told him that if there was no improvement at the next monthly period, I would get an assistant, go to his house, put his wife under an an-

*Read before the Huron Medical Association, Ontario, Canada.

æsthetic, straighten the uterus and rapidly dilate the os internum. She reported "no benefit"; hence, in company with Dr. Smith, I went to the house on the 20th of March, 1893, with the intention of carrying out my promise. Upon examination, however, Dr. Smith thought that we had better not dilate, but replace the uterus, scarify the os and insert a boro-glyceride plug, which we did. We then taught the patient how to use hot water injections and insert the plug in question herself. We repeated the scarification once a week.

The next monthly period showed no improvement and the husband asked for a consultation with Dr. Gunn, which was agreed to.

The doctor and I met and decided to dilate by the rapid method. We used Palmer's dilator, and afterwards plugged the cavity of the uterus with iodoform gauze, which we left in for three days for the purpose of keeping the os open and for securing drainage.

Once more the patient reported that the pain at the monthly period was as severe as ever.

We resolved to dilate more fully with Goodell's dilator, at the same time incising some of the fibers of the internal os and making an application to the whole endometrium. On the 20th of May we met, and having anæsthetised the patient thoroughly, dilated the os, cutting some of the fibers with a probe-pointed bistoury, and made an application of carbolic acid, full strength, packed with iodoform gauze as before, inserted the usual plug and left her.

Report after next period: "No alleviation of pain." During all this time the patient was on good tonic medicine with the best hygienic surroundings.

In this manner the latter part of May and the whole of June was passed with no permanent improvement. The patient and her husband were losing heart and wished to know what more could be done.

I advised them to take counsel of Dr. Temple, of Toronto, a specialist in diseases of women, which they consented to do. Accordingly in the early part of July they proceeded to Toronto with a letter explaining all we had done in the case.

After thoroughly examining the patient, he advised her to return and allow me to treat her still with galvanism, as he considered that method had not had a fair trial.

Having secured a galvanic battery in the meantime, I was prepared to carry out his advice.

On July 17th I gave the patient her first *séance*, using the smallest of the graduated dilators manufactured by Waite and Bartlett of New York. Dilated again on the 24th; then on the 31st of the same month, and so on about once a week, but avoided coming within about four days of the menses. This treatment continued through the months of August, September, October and November with varying results; sometimes the patient reporting an improvement. and at other times that she was "no better."

I dilated until the second largest size passed the os internum without much trouble, beginning always with a smaller size, but gradually increasing until, at last, the largest size passed. There was no anæsthetic used, and very little pain was experienced except when the dilator passed the internal os, which it generally did with a jump.

I generally began with fifteen milliamperes and gradually raised the strength to thirty or forty, lowering the power when pain was complained of. I used a bivalve speculum and had the patient on her back in the gynecological chair, by which I was enabled to watch the electrolytic action going on.

I always inserted a boro-glyceride plug, and enjoined her to go to bed for twenty-four hours after the operation. Sometimes I administered an opiate at bedtime.

About the middle of November, my patient becoming somewhat restive, I wrote to Dr. Lapthorn Smith, of Montreal, an authority on both galvanism and diseases of women, giving him a full history of the case with treatment pursued. He wrote urging me to persevere in the treatment, but to give two *séances* in the week, and he believed that I would be ultimately successful. My hands being strengthened by this advice, I went on with the *séances*.

During December and January the patient materialized twice a week, except when monthly flow prevented, taking her last *séance* on the 3d of February, 1894—twenty-one in all.

I had by this time arrived at the conclusion that there must be trouble of an obscure nature in the ovaries or tubes, or both, and that any amount of treatment directed to the uterus would fail to cure her. I considered, reasoning on the principle of exclusion, that all means having failed, an operation was now indicated as a last resort, to render "life worth living." I advised a laparotomy and mentioned my friend Dr. Gunn as a careful and successful operator in such cases.

After a delay extending from the 3d of February till the 4th of July, during which time all treatment was suspended, the operation was performed. During the period of inaction the pain increased in severity so as to render her life intolerable.

On the 4th of July last Dr. Gunn performed the operation, being assisted by Dr. Turnbull and myself. Both ovaries and tubes were removed. The ovaries were found slightly enlarged; they contained small cysts, varying in size from a bean to three times that size and numbering from eight to twelve in each ovary. Had she lived a few years in this condition she would in all probability have developed large cystic ovaries, multilocular in character.

The writer attended to the after treatment. The wound healed by first intention. The patient made an uninterrupted recovery. She was troubled with headache for some time, but neither pain nor menstruation returned. With fresh air, exercise and cheerful society she gained strength and soon resumed her wonted cheerfulness. The result of the operation was all that could be desired.

REMARKS.—(1). We think that all known means should be tried—as we did in this case—before a laparotomy, which is in itself a mutilation, be resorted to.

(2). We do not think that cystic disease of the ovaries could have been diagnosed in this case, as there was an entire absence of those symptoms which usually guide us in such cases, and the fact that Professor Temple failed to diagnose the conditions of those organs would lead us to this conclusion.

(3). Where the cause is uterine—as it more frequently is—the galvanic treatment is invaluable and should in all cases be tried before a laparotomy be resorted to.

(4). We think that in cases like this where pain begins before the flow, showing that it is ovarian or tubal in origin, an operation is more frequently necessary than when it originates from other causes; of course when other means fail the indication is clear.

(5). In conclusion we would say that the operation is a tolerably safe and successful one, the principal objection being that it unsexes a woman. However, we would say that when all reasonable means fail, by all means let laparotomy be performed with proper precautions and with as little delay as possible.

AUTO-INTOXICATION.

J. R. LEMON, M.D., ST. LOUIS, MO.

The tendency in medicine to-day is to study the origin of disease. We are not satisfied, neither should we be, to classify symptoms, give them, collectively, a name and consider our work done.

A physician that works in this manner should retire from the profession at once, as he is not capable of appreciating the responsibilities of his work.

As Bouchard says, the causes of diseases may be many, but the processes following those which produce disease can be relegated to four types. These four chief pathogenic processes are: *first*, primary elementary dystrophies; *second*, nerve reactions; *third*, disturbances antecedent to nutrition; *fourth*, infection. In attempting to place before you in a concise manner these thoughts upon auto-intoxication I will have occasion to refer to the process of disturbances antecedent to nutrition, because this, in my opinion, is the most important factor in the development of chronic diseases, and one that should not

be overlooked when attempting to prevent the development of the acute.

To understand the antecedent disturbances we must first be acquainted with the process which takes place in all healthy tissue, and which we term metabolism. For the purpose of illustration we may take the instance of a muscle of definite structure; it enjoys a free supply of blood and displays, during contraction, energy, heat and sound. It produces certain chemical substances, carbonic acid, water, etc. The blood becomes venous, *i.e.*, loses oxygen and certain elements that supply nutrition to the tissue. The character of the changes that take place in the muscle will depend largely upon the material supplied to the tissues of that muscle. Thus the protoplasm acts on and alters the lymph, and the lymph acts on and alters the protoplasm, this constituting the vital process, the life of tissues, so that it is apparent that the healthy activity of the tissue will depend upon the kind of material supplied. In considering the metabolic changes in the tissues, we must always remember that if the waste material be carried from the tissues by the blood, these products of cell activity must be eliminated by the emunctories, that the blood may be relieved of its load of waste in order that it may carry again to the tissues the material prepared for their nutrition and the oxygen that must be incorporated in order to have healthy cell activity.

Now we can see how much we must depend upon the emunctories to relieve the system of the poison produced in the metabolism of tissues, and in order that their functions are properly performed, it is necessary that the blood, circulatory apparatus and nervous system be in good condition. So here we are again liable to have a double reaction, the emunctories failing to act properly if either the blood, nervous system or circulatory apparatus become disordered, or the emunctories fail to functionate properly. That the primary cause of disturbances in metabolism may be looked for from two sources, *i.e.*, the product supplied by the blood for pabulum and the oxygen, admits of no dispute. If the plasma takes to the tissues a supply that is over-rich in various constituents, that contains poisons that have not been eliminated by the emunctories, or that is deficient in nutritive principles, or if the supply of oxygen is insufficient from any cause, the tissues will not be capable of performing their metabolic changes in a proper manner. We will look for cause of interference with metabolism which originate in the intestinal tract. For instance, we have a patient, as all have had, who presents himself for treatment and complains of feeling much depressed in the morning upon awakening, slight headache, probably has slept poorly, is dizzy upon attempting to rise from bed, possibly almost falls while washing his face, is very sensitive to slight changes in the temperature—in other words, takes cold easily, disturbances of vision, and possibly contraction of hands, as pointed out by Kussmaul, Beaumetz and others. In this case we examine the stomach carefully and find that there is dilatation; there is also eructation produced that may become fetid, still, owing to the inactivity of the muscular coat of the stomach, eructations are not always present. Regurgitation with acid odors may take place. This is positive evidence that there is fermentation in the stomach. The feces are generally acid and peculiarly offensive; and upon careful inquiry we may find that although the operations are soluble there is a feeling that the act is incompletely performed, and there is likely to be burning about the anus. In such a case we will find congestion of the liver, because the organ has attempted to prevent the poisons generated in the intestinal canal from getting into the general circulation. The metabolism in the liver becomes weakened, and eventually the organ becomes indolent and allows the poison to enter the general circulation and we have, as a result, auto-intoxication.

Again, we have the nervous system exposed to a shock; there is a disturbance in the circulation; the cutaneous vessels are contracted, and there is an increased amount of blood in the central organs; the great regulating apparatus, the kidney, does not respond; the equilibrium is not re-established and, as a result, we have possibly a catarrhal condition of the common bile duct which interferes with the outflow of bile. There is also suppression of the part taken by the liver in dis-assimilation, and waste products that should be eliminated are reabsorbed and the result is auto-intoxication which

would be of much more frequent occurrence if it were not for the permeability of the kidneys. In this we have a constant menace to the entire economy, for the irritating products which escape by the kidney are likely to irritate that organ to such an extent that it may fail to eliminate the poisons that have been absorbed from the liver. Therefore it is the duty of every physician to watch and investigate these important emunctories, and every care should be taken to relieve them of the injurious effects of the elimination of these poisons by diluting them as much as possible.

In diseases of the air passages auto-intoxication is so palpable to everyone that we need hardly dwell upon the subject. The accumulation of carbonic acid and other waste products in the system, which should be eliminated by the lungs, is one reason why these diseases are often so difficult to manage and why pneumonia, for instance, is such a fatal disease, the gravity of disease increasing in proportion to the amount of eliminating lung tissue involved; in other words, the death of the patient from pneumonia is caused by auto-intoxication.

In concluding, I repeat, that in those cases of serious impairment of the metabolic changes in the tissues; where oxidation is incomplete; where the nervous system is unstable; the circulatory apparatus is defective; the kidneys, lungs, skin, bowels or the liver are being overworked, either from the products of dis-assimilation or mal-assimilation, and in spite of those cases where one or more of the emunctories are defective in themselves, consider the possibility and the probability of auto-intoxication.

Remember again, that from these causes the primary disturbances antedating the nutrition of every form of tissue in the body originates, that in these disturbances we often find the commencement of not only such diseases as Bright's disease of the kidney, diabetis, acute yellow atrophy of the liver, but that carcinoma, sarcoma, etc., may have their origin from the same cause. And, last but not least, it is the duty of the physician of to-day to guard against the accumulation in the system of such products as poison the tissue, such as cause auto-intoxication, and in this way disturb the general nutrition.

TUMORS OF THE TONSILS.

O. M. WATERMAN, M.D., Milwaukee, Wis.

While the soft palate appears to be a favorite seat for neoplasms, tumors of the tonsils are by no means rare, and benign tumors are fortunately far more frequent than cancerous growths.

Speaking of the former, we find almost every variety represented, cysts, fibromata, lipomata, papillomata and angiomata; more rarely myxomata and adenomata. The tumors of papillomatous structure are very frequent and, if not large, hardly give rise to any distressing symptoms; when more extensive, they hinder the process of swallowing and occasionally produce dysphagia. They differ in size from that of a pea, to diffuse masses involving the velum palati and the pillars; in the latter case they are very apt to recur after removal. Lipomata and angiomata are rare, while fibromata are more frequently found and their growth is slow and painless.

An interesting case is reported by Lefferts in the "Transactions of the American Laryngological Association," 1889. The patient, a man fifty-five years old, had a fibroma extending from the right tonsil almost to the opposite side of the fauces; the tumor was pedunculated but not vascular. After breathing became seriously interfered with, the tumor was removed with the wire ecraseur and without hemorrhage. In another case, reported by Fitzgerald in the *Australian Medical Gazette*, a fibroma, two and a quarter inches long and one and a half inches thick, was removed with a cold snare without difficulty. Fibro-enchondroma and cystoma, are of rare occurrence. The former is removed by enuclea-

tion, the latter by incision and the injection of an irritating fluid exciting inflammation. Lymphadenoma has been found in leucemic subjects, and a case is reported by Lennox Browne (*Journal of Laryngology*, July, 1891,) where the left tonsil was converted into a large red tumor, smooth, not painful and non-fluctuating. The right tonsil appeared hypertrophic. Cervical and axillary glands were enlarged, but the spleen was normal. Masses weighing about an ounce were removed with the cold snare. The microscopical examination showed the characteristics of lymphoid cells.

That errors in making a diagnosis are possible, is illustrated in Frank's case. A male, forty-six years of age, had much enlarged tonsils and adenoid vegetations in the nasal pharynx. The case seemed to be one requiring tonsillotomy and removal of the adenoids, which was done. Relief was only temporary, and microscopical examination of the recurring growth revealed a sarcoma, which terminated fatally in a comparatively short time. Morell McKenzie advocates interstitial injections of acetic acid solution in such cases. The prognosis in all tumors such as we have mentioned is favorable, and removal can be accomplished, mostly without difficulty. In tumors with a pedicle it might be done with a snare, scissors or galvano cautery, but a flat growth has to be removed with a sharp spoon and afterwards cauterized. Angiomata must be treated by electrolysis.

We now come to the malignant neoplasms of the tonsils. We have stated that fortunately these are comparatively rare. McKenzie found in 8,289 cases of tumors of the tonsils, only three malignant growths. Whether malignant tumors are of primary or of secondary origin is yet an open question. Two forms are most frequently found—sarcoma and epithelioma; the former seems to prevail more among females and presents to the eye a round, smooth tumor, which ulcerates sooner or later to a greater or smaller extent. Epithelioma is more painful than sarcoma, as disintegration takes place at a very early date. A characteristic of malignant tumors of the tonsils is the lancinating pain in the ear. Other symptoms are swelling of the lymphatic glands, fetorous, emaciation and hemorrhages. While the diagnosis is not difficult for anybody familiar with the rhinoscope, the difference as to the histological structure is not easily ascertained; in fact the microscope gives better evidence in cases of epithelioma than in cases of sarcoma. It also happens that mistakes are made between malignant neoplasms and tubercular or luetic lesions, especially when the characteristic knots and papillary excrescences are absent, and only the therapeutic trial with specific remedies and examination of extirpated parts can be decisive.

The prognosis for sarcoma and epithelioma must of necessity be unfavorable, except in cases which are subject to a spontaneous retrogressive metamorphosis.

If there is no surgical interference, death usually occurs within twelve months, and it seems that in many cases the operative interference forms a stimulus to the activity of the growth. Death is caused immediately by inanition, cachexia, hemorrhage, or edema of the epiglottis or the larynx.

The only operation promising a lasting success is the extirpation of the tumors from the outside; other procedures may give temporary relief, but can only be considered palliative; and in fact the chances for success are not promising, as the operation is difficult on account of the anatomical relations, and secondary pneumonia is to be feared.

The tables show a mortality of forty-five per cent., but as not all fatal cases are reported it will not be amiss to consider the mortality much greater.

As to the radical operation and its procedure, two methods principally are to be recommended. The first is Czerny's operation, which is conducted as follows: After tracheotomy has been performed an incision three inches long is carried from the angulus oris downward to the anterior border of the masseter, and thence to the level of the os hyoideum; the maxilla is then divided to the third molar tooth. It might be necessary to cut through the stylo-hyoideus, or styloglossus muscles, the hypoglossal and glosso-pharyngeal nerve and also to ligate the laryngeal artery and other vessels. The maxilla is reunited by silver wire sutures, and the wire is turned around the neighboring teeth as an additional hold. Drainage being established, the tracheotomy tube is left *in situ* for a number of days. The wire sutures are

left indefinitely. The wire around the teeth must be removed in about two weeks.

The second method proposed is Mickulicz's operation. This has a tendency to prevent the entrance of blood into the air passages, and so inhibit secondary pneumonia and other dangerous occurrences. He makes an incision four or five inches along the anterior border of the sterno-cleido-mastoid, the jaw is then divided and the ramus ascendens dissected, and the mouth and the pharyngeal cavity not being exposed, the entrance of blood into the larynx does not occur. The operation might also be favored on account of avoiding those distorting cicatrizations following operations of the hard palate and the base of the tongue. Pharyngotomy has not given any encouraging results.

At the conclusion of this sketch, I wish to mention that no case of malignant tumor of the tonsils can be pronounced cured if three to four years have not elapsed without recurrence taking place.

COMMUNICATIONS.

ENDOMETRITIS FOLLOWING ABORTION; DILATATION AND CURETTING; VENTRAL HERNIA WITH STRANGULATION OF OMENTUM; FIBROIDS OF UTERUS; CARCINOMA VAGINA; CARCINOMA UTERI.*

E. E. MONTGOMERY, M.D.,† PHILADELPHIA.

Before you is a patient thirty-five years of age, whose father died of apoplexy; her mother and one sister are living and in good health. She has no hereditary tendencies and enjoyed good health as a child. Puberty occurred at sixteen, the flow was regular, lasted three to four days and was profuse. She was married at seventeen and had five children, the last one in May, 1893, which was still born. Her labors were easy and the puerperium normal. She was never confined to bed for more than ten days. She had four miscarriages, the last one in August, 1894. The present trouble began following this miscarriage, since which time she has had persistent metrorrhagia. She has had a continuous discharge of blood until her admission, since which there has been no bleeding. Beyond hemorrhage she complains of no special symptoms.

The subject of uterine hemorrhage is of very great importance and should always receive very careful consideration at your hands. We should permit no patient suffering from uterine hemorrhage to go without careful examination, and if physical examination and inspection of the cervix do not disclose anything as a cause, the cavity of the organ should be thoroughly explored. Hemorrhage may arise from disease of the uterus itself, or from a diseased state outside of it, so that it is well to determine whether there is not an actual local cause for the symptom. The external condition which may produce hemorrhage may be either constitutional or local. Of the former we have disease of the kidney, of the heart, or of the liver, all of which, by their obstructive influence, may increase the congestion of the pelvic viscera and thus produce hemorrhage. In addition to these constitutional conditions we may have hemorrhage as a result of scurvy, or as a preliminary symptom of the exanthematous fevers. Local conditions outside the uterus, which give rise to this symptom, are those which interfere with the circulation in the organ; thus, a growth situated in the pelvis, producing pressure upon the return circulation, increasing

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the congestion. Such growths are ovarian, parovarian, broad ligament cysts, ectopic gestation, or the presence of inflammatory exudation. We have carefully examined this patient and find no evidence of any constitutional disease which may produce interference with the circulation, nor is there any indication of disease outside of the uterus, so that we feel assured the latter organ must be the seat of the disorder.

Careful examination in her case reveals that there is an inflammation of the endometrium from the appearance of the cervix, and this of itself should lead us to make a thorough and careful exploration of the uterine cavity. To accomplish this it is necessary to dilate the cavity of the organ. This may be accomplished either by slow or rapid dilatation. The slow method of procedure consists in the introduction of tents, either sponge, tupelo or laminaria, by which the cavity of the organ is dilated through the absorption of the moisture and retention of the tent. It may be also accomplished by repeatedly packing the cavity of the uterus with gauze. This method of procedure was introduced by Vulliet, and he was able not only to accomplish the dilatation to a degree to permit the introduction of the finger, but also the inspection of the entire uterine cavity. These methods of procedure, however, are slow, and it is preferable that it should be accomplished more rapidly. For the rapid dilatation of the uterus we have a number of dilating instruments which act on the principle of stretching the cervix uterine cavity until it can be explored either with the finger or by means of a curette. The majority of instruments act by separating the blades, either parallel or slightly divergent until the cavity is pretty well dilated. The plan I shall show you, and the one which I prefer for the reason that it accomplishes the dilatation by stretching all the fibres of the cervis, is through the introduction of graduated bougies, increasing these up to the desired size for the dilatation. The dilatation in this way can be accomplished with less danger of tearing, with less hemorrhage and with less irritation of the canal. It is important, however, in using these bougies, to exercise the greatest care for fear that in the introduction of the instruents, one after another, until the dilatation has reached the desired size, a rupture of thinned or fatty walls may occur.

After the uterus is dilated, we use a curette, preferably a sharp, fenestrated instrument, with an opening through its handle. This is introduced and withdrawn from the uterine cavity, turning it in every direction so the entire cavity of the uterus will have been curetted. As the debris is scraped off, the fluid passing through the handle washes it out, keeps the cavity clean, and prevents a collection of blood within it. This irrigating fluid may consist of from a one-half to one per cent. creolin solution, or a solution of carbonate of soda, one or two ounces to the gallon of hot water, using the water quite hot, and thoroughly irrigating the cavity to thus remove all the mucus from it, after which pack the uterine cavity with iodoform guaze. It should be carried to the fundus of the organ, filling it up, and serves the purpose of keeping the walls separate, making pressure upon the parts and decreasing the amount of bleeding. It presses upon the raw surfaces until plastic material is thrown out, glueing up their vessels by its presence, and through its capillary action as a drain, facilitates the removal of ptomaines which may form, and decreases the probability of septic infection and septic extension.

I have repeatedly endeavored to impress upon you the importance of care in dilatation and curetting, for fear the wall of the uterus may be punctured, and make an opening into the peritoneal cavity. This is particularly important in those cases in which abortion has frequently occurred. Only recently a number of cases have been recorded, in which the cavity of the uterus has been perforated with placental forceps following an abortion, in the endeavor to remove portions of the placenta, and the first intimation the operator had of the puncture was the presence at the external os of a loop of intestine, drawn down by the forceps. It should be the rule in such cases not to use placental forceps without the introduction of the finger as a guide. In a case in which the uterine wall has been punctured, it would not be safe, of course, to proceed with the irrigation of the cavity for fear the fluid may escape into the abdomen. In such cases the cavity should be at once packed with iodoform gauze to prevent leakage into

the abdomen. In addition to acting as a tampon and affording drainage, the gauze serves as a stimulant to the contraction of the uterus, through its presence as a foreign body, and thus promotes increased involution; it serves as a great advantage in cases of subinvolution, causing the size of the organ to be rapidly decreased. A second piece of gauze is put in the vagina, raising the uterus upward. The gauze may be permitted to remain for three or four days, the vulva being covered with a gauze pad which will be frequently changed. In performing this operation we exercise as thorough antiseptic or aseptic precautions as we would if we were preparing to open the abdomen, for we realize that through the sinuses of the uterus and its abundant vascular and lympathic systems, we may have rapid absorption of material which may be carried to different portions of the body and produce either local or general septic symptoms. The gauze will be removed at the end of four days and the vagina will then be irrigated twice in twenty-four hours, using either 1:30 sulphurous acid solution, or 1:3000 acid sublimate. If the patient should suffer pain we will have her bowels freely evacuated with a saline purgative and the ice bag will be placed over the abdomen. If the pain should be continuous and attended with some elevation of temperature, the gauze packing should be at once removed and, if necessary, the cavity of the uterus may be irrigated with creolin solution or plain hot water, using for this purpose a catheter with a return flow. The plan of treatment indicated is one that is very effective in subinvolution, and in endometritis of hemorrhagic character, and I do not believe that in any case the uterus should be dilated without curetting and packing follows. Indeed, no instrument should be introduced into the cavity of the uterus without we are able subsequently to render it sterile and afford drainage.

Ventral hernia with strangulation of omentum:—The next patient is thirty-three years of age, has had one miscarriage when sixteen, and was in bed nearly a year subsequently. She underwent an operation some three years ago at the hands of a prominent physician in this city. She was in bed nine weeks following the operation. Nine months after the operation she returned with a small protrusion at the lower angle of the incision, which continued to increase in size and caused severe pain. For four days the bowels were regular, have been moved twice in the last twenty-four hours. She has no nausea or vomiting. The operation was done for pus tubes and she had a subsequent one for ventral hernia. She comes to us to-day with a history of a protrusion at the lower portion of the abdomen. You see it is situated at the central line. I asked her to cough and find it is apparently not influenced by it. While there is a protrusion in the median line, there is a more marked one upon the left side. This protrusion is hard, painful and resisting, the skin over it is somewhat reddened and inflamed, and so far as I can see this protrusion is not directly connected with the hernia. This case is one of considerable interest and difficult of diagnosis, whether the condition is hernia of the omentum, whether in addition to the hernia there is an acute inflammatory trouble upon one side. As I press my fingers into the opening I am able to push back the protrusion of the gut, so I can discover nothing that would give rise to this protrusion on the left side. It is hard, dense, firm and extremely painful. There is no sensation of protrusion of gut, unless it has made its exit through the abdominal wall. I am unable to discover any sign that the latter condition has occurred.

The point to determine is whether this mass is a hernia, and if so, a knuckle of intestine or omentum. That it is not a knuckle of intestine, is evident from the fact that there is no sign of strangulation present here if so large a portion of the intestinal tract had made its exit and was thus strangulated. The condition has been in existence since Friday last, and if a knuckle of intestine was thus strangulated, we would have her suffering before this from symptoms of obstruction, and with vomiting of stercoraceous material. We would expect, also, to find the abdomen greatly distended and all the symptoms of marked strangulated hernia. There would be symptoms of an irritated condition of the peritoneum and more or less effusion of the peritoneal cavity; in the absence of special symptoms, the general symptoms of a developing peritonitis. I do not believe this is a hernia, as we can feel the opening and can

apparently separate it from the mass to one side, the latter inference would seem to be justified.

If it is not a hernia, what is the condition? The redness of the surface, the size of the mass, its tenderness, would lead us to believe that we had an acute inflammation, with development of an abscess. It may be interesting to determine why we should expect an abscess in this situation. It is not unusual to find that points of induration in the abdominal walls following an operation, may break down and suppurate. This may have been the explanation in this case. I do not propose, however, to make an opening at once into this, even though it presents all the symptoms of an abscess, as it would be very unjustifiable to risk such a procedure unless we are absolutely certain that we have excluded the possibility of hernia, as every measure should be exhausted that would favor such elimination. So prior to opening this cavity I shall make a puncture with an exploring needle and see if we can obtain pus. Thoroughly cleansing the surface and having a clean instrument, I make this puncture and do not find, as I had expected I might, any indication of pus. There is a free discharge of blood, showing there is some congested tissue within. Having relieved the congestion through this puncture, by manipulation I find I am able to dislodge a small mass from the cavity here, and this mass can be pushed back through the ventral opening, so we have had a hernia, not of a knuckle of intestine, but of a portion of the omentum, which has been so firmly forced into the abdominal walls as to give rise to this painful tumor and to the presence of external redness.

You can now appreciate the importance of having exercised the precautions that are done to avoid the possibility of any error. Had I proceeded upon the theory that this was an abscess and made an opening, I would have injured the omentum, rendered its return a source of danger and might possibly have injured a knuckle of intestine. So in every procedure of this kind, even where you feel there is reasonable certainty for your assurance, leave no means of completing your diagnosis unused, but resort to operative procedure. The puncture with the exploring needle, even though it may have been a knuckle of intestine, would not have had any injurious effect. It would have merely permitted the escape of any retained gas and by decreasing the size of the protruding mass would favor its reduction.

A compress will be placed over this opening to prevent the further escape of bowel or omentum. The patient should either be subjected to radical operation for the cure of the hernia, or directed to wear a pad or truss that will prevent its further escape. In addition to the difficulty of diagnosis in this case, it is of particular interest from the fact that the gentleman who has operated upon her twice, is one who claims to be particularly free from the accidents and sequelæ of abdominal surgery, and lectures in very strong terms his colleagues who are engaged in similar practice, for their failures, citing them as evidences of bad surgery. She underwent two operations; in the first place for removal of pus tubes, and second, for relief of ventral hernia. She still has a hernia in which there has been a portion of the omentum pushed out and pushed into the abdominal wall between the muscle and superficial fascia. This condition is one which may occur in spite of every precaution. Ventral hernia is so undesirable that we endeavor in every way to obviate its occurrence, yet in spite of all measures we take, it does occur. The gentleman who has operated upon this patient twice, is a man of large experience, a man of ability, a careful surgeon, and the mere fact that he has done the operation is an indication that every measure which could have been exercised has been employed to prevent this occurrence.

Fibroids of Uterus.—The next patient is 27 years of age, puberty occurred at 15, with no unpleasant phenomena. She has been married three years, had one miscarriage after two and one-half months gestation and was confined to bed subsequently three months; now complains of pain during menstruation which lasts ten days; has severe pain in the left side, fever, nausea, vomiting, with constipation of the bowels. The points in the history of this patient are, that menstruation lasts ten days, is quite profuse, and taken in association with the color of the individual, leads us to suspect the possibility of some growth about the uterus. Of course it is not impossible

that this hemorrhage may be a result of conditions resulting from retained products of abortion. As I introduce the finger into the vagina I find the cervix directed anteriorly; passing the finger posteriorly it comes in contact with the posterior surface of the uterus, which may be followed out on the right side of the patient. On the left side there is a rounded mass which projects against the posterior wall of the vagina, is closely associated with or attached to the side of the uterus, and has pushed the latter organ toward the right. This mass fills up entirely the left side of the pelvis. It is evidently not of inflammatory character. We are led to this supposition by the fact that this uterus seems to be impacted in the pelvis, that it is not movable. The mass to the left, while rounded, is very resistant and firm, and the fingers can be passed over it; there is no melting away of the mass into the tissue around it as would be the case in an inflammatory condition. In other words, the mass is defined and limited. While it fills up the pelvis it has a definite shape of itself, and is not merely a mass of inflammatory exudation. Of course we could have a mass in the tube and ovary, the result of inflammation, containing pus, but in such a case we would find there would be more or less inflammatory exudate around it, so the tissue would be hard, difficult to define and limit. In this case the mass is round, closely attached to the uterus, fills up the left side of the pelvis, pushing the organ to the right. I am inclined to believe this to be a fibroid. This, however, is still further increased by the fact of the color of the patient. She is a colored woman and in this race there is an increased tendency to development of such growths. This growth, evidently situated in the broad ligament on the left side, has grown down into the pelvis, pushing the uterus upward and over to the opposite side. The pressure of the mass would give rise to interference with the circulation of the pelvis and increase the tendency to hemorrhage. Whether it is inflammatory or a growth, we would be likely to have hemorrhage. In this patient the only plan of treatment of any service would be operative, and we cannot expect that medicinal treatment would be of much service to arrest its growth or allay the symptoms from its presence. The operation would be removal of the uterus. This might be attended with some difficulty for the reason that such growths developing into the broad ligament, sometimes spread it out, and if they develop low down they lift up the ureter and bladder, and greatly increase the danger in their removal; indeed, in some cases so intimately connected does the ureter become that it is difficult to remove the growth without injury to that duct.

Cancer of the Vagina. The next patient is a woman upon whom we operated some time ago on account of an induration which involved the anterior wall of the vagina and the orifice of the urethra. As I separate the vulva you notice upon the right side and in front a raw surface, a mass of induration which extends up the anterior wall of the vagina nearly to the uterus. We attempted an operation with the hope that we might be able to remove the disease and arrest its growth, but found it involved the entire anterior wall of the vagina and the surface of the bladder to such a degree as to preclude the possibility of its removal. The lower part of the urethra broke down entirely at the time, so it left simply the ring at its upper part, through which the finger was introduced, disclosing the extent of the disease. The operation at that time gave great relief, as it facilitated the more ready evacuation of the bladder and relieved her from the distress and pain attending it. If we were so situated as to be able to accomplish it with safety, this patient would be a good one upon whom to try the influence of injections of the poison of erysipelas. This plan of treatment has seemed in some cases, more particularly, however, in those of sarcoma, to arrest the growth and facilitate the relief from the disease. It is not a plan of treatment we could pursue with safety in a general hospital, and as we have but one ward for treatment of such cases in this institution, we cannot try it.

Carcinoma uteri.—The next patient is thirty-eight years of age; married; had nine children, one miscarriage; complains of hemorrhage; almost constant discharge from the uterus; has lost weight; has severe pain in the lower abdomen; bowels are constipated; has pain on urination; poor appetite. As I separate the vulva I find a bloody discharge; as the finger is introduced into the vagina it comes in

contact with the ragged, indurated surface, which is flush with the roof of the vagina. In other words, the vaginal portion of the cervix is destroyed, and an indurated margin around an opening, which is filled with soft, friable, easily broken-down tissue. As I pass my finger further around the vagina, I find a sensation of resistance, more indurated tissue. I am doing this with exceeding care, as I do not wish to make pressure upon this surface, which will produce hemorrhage. If I introduced my finger into the uterus I would probably cause a profuse hemorrhage. I did not tell you that this patient has been suffering from pain, hemorrhage and discharge, in addition to the loss of flesh; the physical signs disclose the fact that she is suffering from an epithelioma of the uterus, unfortunately one which has progressed to such a degree that there is no plan of operative procedure by which we can hope to arrest its growth. The disease has already infiltrated and extended beyond the confines of the uterus, so that we can afford no hope of radical removal of the disease. All we can do will be to make her comfortable for the brief span of life remaining. The case impresses upon us the importance of early and careful examination, and I cannot urge upon you too strongly the importance of permitting no patient to continue under your care who suffers from prolonged or frequent hemorrhage without a careful examination to ascertain its cause. It is far better for you to lose a patient than to attempt to treat her without having the necessary means to ascertain the condition.

CORRESPONDENCE.

CHILD CRYING IN UTERO.

EDITOR MEDICAL AND SURGICAL REPORTER:

SIR: In THE MEDICAL AND SURGICAL REPORTER for January 5, 1895, is an article copied from the San Francisco *Medical Journal*, entitled "A Case of Child Crying in Utero." I desire to report a case analogous to the one there recorded, albeit with a less favorable termination.

On January 29, 1891, I was associated with Dr. S. D. Bell, of Butler, in a case of labor, of which the following notes were taken at the time: Mrs. S., white, aged thirty-six years. Multipara, this being her ninth confinement, all but two of the labors being instrumental ones. A small woman, four feet eleven inches in height; weighing about one hundred pounds; the left leg and hip are smaller than right side, and she walks with a limp. She gives a history of an attack of infantile paralysis at the age of four or five years, to which the deformity is said to be due. Pelvis deformed, the right half being developed properly, the left half undeveloped.

Labor began at 2 P.M., delivery being accomplished at 7 A.M. of the succeeding day. The head early engaged the upper strait, but on account of its large size and the deformity of the canal, it would not descend although labor pains were strong and regular. As the patient had given birth to children without instrumental aid, some little delay in application of the forceps was made after complete obliteration of the cervix and dilatation of the os uteri.

The high application forceps was then resorted to, the patient being anesthetized. Traction was made but the instrument slipped off. Twice was the process repeated with like results; the amniotic liquor mostly escaping. The low application forceps was now substituted when the cry of the unborn babe was heard. Traction was made and, after three to five minutes efforts at delivery, the crying was repeated with greater vigor, being clearly audible to the four or five persons in the room.

We attempted to hasten delivery and preparations to resuscitate the child were made. Delivery was not accomplished until about twenty minutes after the crying was first heard, a large asphyxiated male child being the fruits of our labors.

All efforts at resuscitation proved unavailing.

As in the case reported, the entrance of air into the lungs is to be explained by the drainage of the fluid from the uterus following the numerous applications of forceps. The medico-legal aspect of cases such as the above would seem to prove an exception to the rules commonly accepted.

Very truly,

G. D. THOMAS, M.D.

Chicora, Pa.

LEPROSY?

EDITOR MEDICAL AND SURGICAL REPORTER:

DEAR SIR: I enclose the report of a case which came under my observation while acting in an official capacity. The parties are all natives of Perry County, Ohio:

On Wednesday, December 19, 1894, there appeared before the Board of Pension Examining Surgeons at New Lexington, Perry Co., Ohio, a young woman, Miss Hannah Garey, aged eighteen years, who applied for a pension as the child of George Garey, a soldier of the late war. The case was a remarkable one, and as rare as remarkable. The mother and a brother older than the applicant, both of whom appeared to be in excellent health, accompanied her. The young man was of fine physique, vigorous and of robust habit. The mother, a well preserved, intelligent woman of forty-four years, whose appearance gave no evidence of ill-health, nor any disorder whatever, affirmed that she had been remarkably healthy all her life.

The applicant, however, presented a sorry contrast to the vigorous health of her mother and brother. Her skin was thickened, rough and swollen. The hands, or what remained of those members, were enlarged to more than double their normal size. On the right hand there remained but the thickened stumps of the fingers which had been amputated by an ulcerative process that had been slowly progressing for a period of sixteen years. The left hand presents the same general appearance as the right, save that the fingers of this hand are lost at the *first* joint, while in the right the ulcerative process has extended to the *second* phalangeal articulation. The feet are enlarged and swollen to twice their normal size; the skin thickened and rough, and the toes of the right foot are lost at the first joint. In the middle of the left sole there is a suppurating ulcer about the size of a silver quarter, the discharge from it being very offensive. There is on the outer aspect of the right arm, above the elbow, a glazed, whitish-colored depression, about the size of the ulcer on the sole, which portends ulceration. At the left radio-carpal articulation there is a deep, narrow ulcer extending entirely around the wrist, which is slowly but surely accomplishing amputation of the hand; the discharge from this ulcer is free and very offensive.

There are some scars on the limbs and arms, showing former ulcerative patches which have healed. Her face also presents evidences of ulceration, the nose, lips and tongue being scarred and disfigured from the same cause. The front teeth are lost and the inferior maxillary shows results of former ulceration by a deep depression on the surface of the gums. There is the peculiar anesthetic condition which characterizes the malady. This affects the entire body, but is especially marked on the hands, feet, forearms and legs below the knee. The mother says that she has to be extremely watchful of her when about the stove, as she would burn her hands or feet unknowingly. The girl is moderately intelligent but can neither read nor write.

This affection began at the age of two years, with ulcerative patches on the lower limbs, hands and feet gradually producing the condition described, and this without excessive pain or suffering to the patient, but with untold care and anxiety to the mother. There are eight children in the family, four older and three younger than this girl. In the youngest, a child of six years, the same malady is developing, being manifest at this time by a marked anesthetic condition of the body, the loss of one or two fingers, and an equal number of toes.

The father was a pensioner; a member of the 187th Regiment, O. V. I., which was stationed for a time at Nashville, Tenn. He afterwards did provost duty at Macon, Ga., until the close of the war. He was considered a man of ordinary good health by his acquaintance; his wife, however, said that for some few years previous to his death, which occurred in March, 1893, he was afflicted with eczema, the discharge from which was very offensive, which resisted all treatment.

That the disease is anesthetic leprosy I verily believe, and I am of the opinion that the seeds of the malady affecting these children came from the soil of the Southland during the soldiers' sojourn there. And, perhaps, that persistent eczema (!) was but the precursor of the malady named which was waiting only for conditions favorable to its development.

Very truly,

G. W. CLEMSON, M.D.

Thornville, Ohio.

TRANSLATIONS.

THE TREATMENT OF SPINA BIFIDA.

Sebileau (*Gaz. Med. de Paris*, Oct. 13, 1894), gives the following treatment for spina bifida.

1. SIMPLE CASES.—(*a*) *Morton's Injections.* Of all of the injections that have thus far been employed, that of Morton alone has remained in use. It is a solution of iodine in glycerin. He replaced the tincture of iodine by a solution of iodine in glycerine in order to evade the dangers of the injection of iodine employed by Velpeau (convulsions, paraplegia, meningitis, suppuration). With a fine trocar the upper portion of the tumor is punctured at a healthy portion of the skin; from 4 to 12 grams of the liquid are withdrawn and from 2 to 4 grams of the solution injected. Rarely a single injection suffices; ordinarily it must be repeated. The results obtained by him appear very favorable; of 71 cases treated 35 were cured, 9 remained unaltered and 27 died. Accidents are less frequent by this method than by the older methods. Death may follow, however, the injection immediately; convulsions and hydrocephalus follow in some cases.

(*b*) *Ligation.* The ligature may be employed when the condition of the lower limbs from the point of view of mobility, sensibility and nutrition do not permit even the suspicion of the inclusion of the nerves in the sac. The end in view is the adherence of the two serous surfaces by their approximation or the necrosis of the tumor. Reynard employed the linear ligature. His procedure consisted in placing upon the sides of the tumor two feather quills joined by a thread. Tavignot employed successfully pincers analogous to the enterotome of Dupuytren. Beaumier fastened the ligature in the scar produced by Vienna paste applied circularly to the base of the tumor. Dubois employed two small metallic plates pierced by a thread and held in place by pins traversing the base of the tumor.

2. COMPLICATED CASES. — *Excision.* This is the true surgical method. Some surgeons practice it with the aid of the galvanic needle or the thermo-cautery with or without previous compression. The use of the bistoury is better. Excision after exploration of the sac, comprises several steps; incision of the skin, dissection of the tumor, the opening and examining of the sac, and the treatment of the vertebral fissure. (*a*) *Incision of the Skin.* If the skin is healthy, mobile, the choice lies between a vertical and a transverse incision; the latter has been practiced by Championière, Périer, etc. It is preferable if the operation be in the lumbar or sacral regions, as is usual, because it is more distant from the genitalia and the anus, and, consequently, less exposed to soiling by the urine and feces. If the skin be red, thin, and excoriated in places, it is

*Translated for THE MEDICAL AND SURGICAL REPORTER by W. A. N. Dorland, M.D.

necessary to make the incision in a healthy spot.

(*b*) The *dissection of the tumor* will be most easy when the sac is extended and thickened.

(*c*) *Incision of the sac.* It is well to incise the sac upon the sides to avoid injury of the spinal cord; the incision should also follow a parallel direction to the intra-saccular nerves to avoid their section. When the sac is opened it is explored, to see whether or not it contains nerves. If not it may be ligated and resected, if it does it is difficult to decide what to do. Some surgeons advise resecting only the segments of the sac comprised between the nerve cords, leaving the latter in place covered with meningeal flaps to which they are adherent; others advise dividing all, nerves and meninges. It may happen in some cases that no disturbance of sensation or motion will follow such a course.

(*d*) *Treatment of the vertebral fissure.* When closure of the sac is well assured it is necessary to close the vertebral fissure. Here two questions present themselves. Is the fissure narrow, or is it large? If of small dimensions the layers of tissues may be sutured one by one without interfering with the bone; the flow of cerebro-spinal fluid may thus be controlled. If the fissure be large it does not suffice to close the soft parts merely; it is necessary to establish a bony barrier. Two methods are suggested: the one consists in approximating the two extremities of the vertebral blades, this is the method of Dollinger of Budapesth; the other consists in implanting in the cleft some periosteum or bone. If periosteum be implanted it constitutes the method of Robert Hayes; if bone, it is the method of Berger. Dollinger devised his method in 1885. Operating upon a little girl, he broke the two rudimentary vertebral arches of the deficient vertebra, drew them together with a strong forceps and secured them in the median line. Hayes, in 1883, engrafted into the fissure flaps of periosteum taken from the rabbit, with good results. In 1892, Berger reported a radical cure of lumbar spina bifida by means of implantation of a bony plaque from the shoulder blade of a young rabbit. Hydrocephalus may follow a radical cure for spina bifida at an early age.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

INTUSSUSCEPTION IN A CHILD TREATED BY INSUFFLATION OF AIR UNDER AN ANESTHETIC.

Dr. H. Swift (*Australasian Medical Gazette*, No. 8, 1894) reports the case of a child of nine months who had always been healthy, but who suddenly began to scream violently, draw its legs up and kick them out as if in great pain. Vomiting occurred several times. No tumor could be detected in the abdomen. Temperature normal; pulse increased. That evening the child was worse, collapsed, retching violently, screaming, and had passed some blood and mucus by the bowel. Intussusception was diagnosticated, chloroform administered and air insufflated into the lower bowel, and a tumor which had been detected, after the child had been anesthetized, above and a little to right of the umbilicus, and which was about three inches long and two broad, with its axis lying transversely, was kneaded while the insufflation was continued. A gurgling sound was heard and the enlargement was found to have disappeared. Tincture of opium was administered and the child soon recovered its usual good health.

A LOCAL APPLICATION IN LARYNGEAL PHTHISIS.

In *L'Union Medicale Du Canada*, No. 10, 1894, in the treatment of laryngeal phthisis, the following is recommended:

Iodoform	grs. lx
Powdered boric acid	grs. vij
Powdered phosphate lime	ʒ ij. grs. xl

Insufflate into the throat morning and evening.

FOREIGN BODIES IN THE TRACHEA AND STOMACH.

Dr. Glasgow (*Memorabilien Hft.* 7, 1894) was called to a boy of eight years,

*In charge of the translator, F. H. Pritchard, M.D.

the congestion. Such growths are ovarian, parovarian, broad ligament cysts, ectopic gestation, or the presence of inflammatory exudation. We have carefully examined this patient and find no evidence of any constitutional disease which may produce interference with the circulation, nor is there any indication of disease outside of the uterus, so that we feel assured the latter organ must be the seat of the disorder.

Careful examination in her case reveals that there is an inflammation of the endometrium from the appearance of the cervix, and this of itself should lead us to make a thorough and careful exploration of the uterine cavity. To accomplish this it is necessary to dilate the cavity of the organ. This may be accomplished either by slow or rapid dilatation. The slow method of procedure consists in the introduction of tents, either sponge, tupelo or laminaria, by which the cavity of the organ is dilated through the absorption of the moisture and retention of the tent. It may be also accomplished by repeatedly packing the cavity of the uterus with gauze. This method of procedure was introduced by Vulliet, and he was able not only to accomplish the dilatation to a degree to permit the introduction of the finger, but also the inspection of the entire uterine cavity. These methods of procedure, however, are slow, and it is preferable that it should be accomplished more rapidly. For the rapid dilatation of the uterus we have a number of dilating instruments which act on the principle of stretching the cervix uterine cavity until it can be explored either with the finger or by means of a curette. The majority of instruments act by separating the blades, either parallel or slightly divergent until the cavity is pretty well dilated. The plan I shall show you, and the one which I prefer for the reason that it accomplishes the dilatation by stretching all the fibres of the cervis, is through the introduction of graduated bougies, increasing these up to the desired size for the dilatation. The dilatation in this way can be accomplished with less danger of tearing, with less hemorrhage and with less irritation of the canal. It is important, however, in using these bougies, to exercise the greatest care for fear that in the introduction of the instruments, one after another, until the dilatation has reached the desired size, a rupture of thinned or fatty walls may occur.

After the uterus is dilated, we use a curette, preferably a sharp, fenestrated instrument, with an opening through its handle. This is introduced and withdrawn from the uterine cavity, turning it in every direction so the entire cavity of the uterus will have been curetted. As the debris is scraped off, the fluid passing through the handle washes it out, keeps the cavity clean, and prevents a collection of blood within it. This irrigating fluid may consist of from a one-half to one per cent. creolin solution, or a solution of carbonate of soda, one or two ounces to the gallon of hot water, using the water quite hot, and thoroughly irrigating the cavity to thus remove all the mucus from it, after which pack the uterine cavity with iodoform guaze. It should be carried to the fundus of the organ, filling it up, and serves the purpose of keeping the walls separate, making pressure upon the parts and decreasing the amount of bleeding. It presses upon the raw surfaces until plastic material is thrown out, glueing up their vessels by its presence, and through its capillary action as a drain, facilitates the removal of ptomaines which may form, and decreases the probability of septic infection and septic extension.

I have repeatedly endeavored to impress upon you the importance of care in dilatation and curetting, for fear the wall of the uterus may be punctured, and make an opening into the peritoneal cavity. This is particularly important in those cases in which abortion has frequently occurred. Only recently a number of cases have been recorded, in which the cavity of the uterus has been perforated with placental forceps following an abortion, in the endeavor to remove portions of the placenta, and the first intimation the operator had of the puncture was the presence at the external os of a loop of intestine, drawn down by the forceps. It should be the rule in such cases not to use placental forceps without the introduction of the finger as a guide. In a case in which the uterine wall has been punctured, it would not be safe, of course, to proceed with the irrigation of the cavity for fear the fluid may escape into the abdomen. In such cases the cavity should be at once packed with iodoform gauze to prevent leakage into

the abdomen. In addition to acting as a tampon and affording drainage, the gauze serves as a stimulant to the contraction of the uterus, through its presence as a foreign body, and thus promotes increased involution; it serves as a great advantage in cases of subinvolution, causing the size of the organ to be rapidly decreased. A second piece of gauze is put in the vagina, raising the uterus upward. The gauze may be permitted to remain for three or four days, the vulva being covered with a gauze pad which will be frequently changed. In performing this operation we exercise as thorough antiseptic or aseptic precautions as we would if we were preparing to open the abdomen, for we realize that through the sinuses of the uterus and its abundant vascular and lympathic systems, we may have rapid absorption of material which may be carried to different portions of the body and produce either local or general septic symptoms. The gauze will be removed at the end of four days and the vagina will then be irrigated twice in twenty-four hours, using either 1:30 sulphurous acid solution, or 1:3000 acid sublimate. If the patient should suffer pain we will have her bowels freely evacuated with a saline purgative and the ice bag will be placed over the abdomen. If the pain should be continuous and attended with some elevation of temperature, the gauze packing should be at once removed and, if necessary, the cavity of the uterus may be irrigated with creolin solution or plain hot water, using for this purpose a catheter with a return flow. The plan of treatment indicated is one that is very effective in subinvolution, and in endometritis of hemorrhagic character, and I do not believe that in any case the uterus should be dilated without curetting and packing follows. Indeed, no instrument should be introduced into the cavity of the uterus without we are able subsequently to render it sterile and afford drainage.

Ventral hernia with strangulation of omentum:—The next patient is thirty-three years of age, has had one miscarriage when sixteen, and was in bed nearly a year subsequently. She underwent an operation some three years ago at the hands of a prominent physician in this city. She was in bed nine weeks following the operation. Nine months after the operation she returned with a small protrusion at the lower angle of the incision, which continued to increase in size and caused severe pain. For four days the bowels were regular, have been moved twice in the last twenty-four hours. She has no nausea or vomiting. The operation was done for pus tubes and she had a subsequent one for ventral hernia. She comes to us to-day with a history of a protrusion at the lower portion of the abdomen. You see it is situated at the central line. I asked her to cough and find it is apparently not influenced by it. While there is a protrusion in the median line, there is a more marked one upon the left side. This protrusion is hard, painful and resisting, the skin over it is somewhat reddened and inflamed, and so far as I can see this protrusion is not directly connected with the hernia. This case is one of considerable interest and difficult of diagnosis, whether the condition is hernia of the omentum, whether in addition to the hernia there is an acute inflammatory trouble upon one side. As I press my fingers into the opening I am able to push back the protrusion of the gut, so I can discover nothing that would give rise to this protrusion on the left side. It is hard, dense, firm and extremely painful. There is no sensation of protrusion of gut, unless it has made its exit through the abdominal wall. I am unable to discover any sign that the latter condition has occurred.

The point to determine is whether this mass is a hernia, and if so, a knuckle of intestine or omentum. That it is not a knuckle of intestine, is evident from the fact that there is no sign of strangulation present here if so large a portion of the intestinal tract had made its exit and was thus strangulated. The condition has been in existence since Friday last, and if a knuckle of intestine was thus strangulated, we would have her suffering before this from symptoms of obstruction, and with vomiting of stercoraceous material. We would expect, also, to find the abdomen greatly distended and all the symptoms of marked strangulated hernia. There would be symptoms of an irritated condition of the peritoneum and more or less effusion of the peritoneal cavity; in the absence of special symptoms, the general symptoms of a developing peritonitis. I do not believe this is a hernia, as we can feel the opening and can

apparently separate it from the mass to one side, the latter inference would seem to be justified.

If it is not a hernia, what is the condition? The redness of the surface, the size of the mass, its tenderness, would lead us to believe that we had an acute inflammation, with development of an abscess. It may be interesting to determine why we should expect an abscess in this situation. It is not unusual to find that points of induration in the abdominal walls following an operation, may break down and suppurate. This may have been the explanation in this case. I do not propose, however, to make an opening at once into this, even though it presents all the symptoms of an abscess, as it would be very unjustifiable to risk such a procedure unless we are absolutely certain that we have excluded the possibility of hernia, as every measure should be exhausted that would favor such elimination. So prior to opening this cavity I shall make a puncture with an exploring needle and see if we can obtain pus. Thoroughly cleansing the surface and having a clean instrument, I make this puncture and do not find, as I had expected I might, any indication of pus. There is a free discharge of blood, showing there is some congested tissue within. Having relieved the congestion through this puncture, by manipulation I find I am able to dislodge a small mass from the cavity here, and this mass can be pushed back through the ventral opening, so we have had a hernia, not of a knuckle of intestine, but of a portion of the omentum, which has been so firmly forced into the abdominal walls as to give rise to this painful tumor and to the presence of external redness.

You can now appreciate the importance of having exercised the precautions that are done to avoid the possibility of any error. Had I proceeded upon the theory that this was an abscess and made an opening, I would have injured the omentum, rendered its return a source of danger and might possibly have injured a knuckle of intestine. So in every procedure of this kind, even where you feel there is reasonable certainty for your assurance, leave no means of completing your diagnosis unused, but resort to operative procedure. The puncture with the exploring needle, even though it may have been a knuckle of intestine, would not have had any injurious effect. It would have merely permitted the escape of any retained gas and by decreasing the size of the protruding mass would favor its reduction.

A compress will be placed over this opening to prevent the further escape of bowel or omentum. The patient should either be subjected to radical operation for the cure of the hernia, or directed to wear a pad or truss that will prevent its further escape. In addition to the difficulty of diagnosis in this case, it is of particular interest from the fact that the gentleman who has operated upon her twice, is one who claims to be particularly free from the accidents and sequelæ of abdominal surgery, and lectures in very strong terms his colleagues who are engaged in similar practice, for their failures, citing them as evidences of bad surgery. She underwent two operations; in the first place for removal of pus tubes, and second, for relief of ventral hernia. She still has a hernia in which there has been a portion of the omentum pushed out and pushed into the abdominal wall between the muscle and superficial fascia. This condition is one which may occur in spite of every precaution. Ventral hernia is so undesirable that we endeavor in every way to obviate its occurrence, yet in spite of all measures we take, it does occur. The gentleman who has operated upon this patient twice, is a man of large experience, a man of ability, a careful surgeon, and the mere fact that he has done the operation is an indication that every measure which could have been exercised has been employed to prevent this occurrence.

Fibroids of Uterus.—The next patient is 27 years of age, puberty occurred at 15, with no unpleasant phenomena. She has been married three years, had one miscarriage after two and one-half months gestation and was confined to bed subsequently three months; now complains of pain during menstruation which lasts ten days; has severe pain in the left side, fever, nausea, vomiting, with constipation of the bowels. The points in the history of this patient are, that menstruation lasts ten days, is quite profuse, and taken in association with the color of the individual, leads us to suspect the possibility of some growth about the uterus. Of course it is not impossible

that this hemorrhage may be a result of conditions resulting from retained products of abortion. As I introduce the finger into the vagina I find the cervix directed anteriorly; passing the finger posteriorly it comes in contact with the posterior surface of the uterus, which may be followed out on the right side of the patient. On the left side there is a rounded mass which projects against the posterior wall of the vagina, is closely associated with or attached to the side of the uterus, and has pushed the latter organ toward the right. This mass fills up entirely the left side of the pelvis. It is evidently not of inflammatory character. We are led to this supposition by the fact that this uterus seems to be impacted in the pelvis, that it is not movable. The mass to the left, while rounded, is very resistant and firm, and the fingers can be passed over it; there is no melting away of the mass into the tissue around it as would be the case in an inflammatory condition. In other words, the mass is defined and limited. While it fills up the pelvis it has a definite shape of itself, and is not merely a mass of inflammatory exudation. Of course we could have a mass in the tube and ovary, the result of inflammation, containing pus, but in such a case we would find there would be more or less inflammatory exudate around it, so the tissue would be hard, difficult to define and limit. In this case the mass is round, closely attached to the uterus, fills up the left side of the pelvis, pushing the organ to the right. I am inclined to believe this to be a fibroid. This, however, is still further increased by the fact of the color of the patient. She is a colored woman and in this race there is an increased tendency to development of such growths. This growth, evidently situated in the broad ligament on the left side, has grown down into the pelvis, pushing the uterus upward and over to the opposite side. The pressure of the mass would give rise to interference with the circulation of the pelvis and increase the tendency to hemorrhage. Whether it is inflammatory or a growth, we would be likely to have hemorrhage. In this patient the only plan of treatment of any service would be operative, and we cannot expect that medicinal treatment would be of much service to arrest its growth or allay the symptoms from its presence. The operation would be removal of the uterus. This might be attended with some difficulty for the reason that such growths developing into the broad ligament, sometimes spread it out, and if they develop low down they lift up the ureter and bladder, and greatly increase the danger in their removal; indeed, in some cases so intimately connected does the ureter become that it is difficult to remove the growth without injury to that duct.

Cancer of the Vagina. The next patient is a woman upon whom we operated some time ago on account of an induration which involved the anterior wall of the vagina and the orifice of the urethra. As I separate the vulva you notice upon the right side and in front a raw surface, a mass of induration which extends up the anterior wall of the vagina nearly to the uterus. We attempted an operation with the hope that we might be able to remove the disease and arrest its growth, but found it involved the entire anterior wall of the vagina and the surface of the bladder to such a degree as to preclude the possibility of its removal. The lower part of the urethra broke down entirely at the time, so it left simply the ring at its upper part, through which the finger was introduced, disclosing the extent of the disease. The operation at that time gave great relief, as it facilitated the more ready evacuation of the bladder and relieved her from the distress and pain attending it. If we were so situated as to be able to accomplish it with safety, this patient would be a good one upon whom to try the influence of injections of the poison of erysipelas. This plan of treatment has seemed in some cases, more particularly, however, in those of sarcoma, to arrest the growth and facilitate the relief from the disease. It is not a plan of treatment we could pursue with safety in a general hospital, and as we have but one ward for treatment of such cases in this institution, we cannot try it.

Carcinoma uteri.—The next patient is thirty-eight years of age; married; had nine children, one miscarriage; complains of hemorrhage; almost constant discharge from the uterus; has lost weight; has severe pain in the lower abdomen; bowels are constipated; has pain on urination; poor appetite. As I separate the vulva I find a bloody discharge; as the finger is introduced into the vagina it comes in

NEURASTHENIA FROM MALARIA.

Dr. Triontaphyllides (*Deutsche Medizinai-Zeitung*, No. 2, 1895) claims that among the various manifestations of malaria, which have not been noticed nor described sufficiently, may be observed neurasthenia. The patient may present no other malarial symptom. During the past four and a half years he has observed about fifty such cases, and the malarial basis he has been able to demonstrate by finding the hematozoa and by the therapeutic test with quinine. In the mildest forms only apathy and psychic malaise are noticed. In the gravest forms all the psychic, vasomotor and other characteristic symptoms may be observed. Sleeplessness, headache and disturbances of digestion are, on the contrary, less constantly observed than in ordinary neurasthenia. Quinine subcutaneously generally brings about a recovery.

A LOCAL APPLICATION FOR URTICARIA.

In *L'Union Medicale du Canada*, No. 10, 1894, for the treatment of urticaria the following local application is praised:

Lime-water	} āā
Cherry Laurel water.....	
Glycerine	

Apply locally and cover the skin with a thin layer of cotton.

IODOFORM INJECTIONS IN GOITRE.

Prof. Garrè (*Centralblatt Fuer Chirurgie*, No. 52, 1894) has, during the past two and a-half years, treated at the Tuebingen Surgical Clinic, one hundred and forty cases of goitre by parenchymatous injections of a solution of iodoform—Mosetig's method—and the results were so brilliant that he warmly recommends it. The patients all remained at their respective occupations. The following solution was used:

Iodoform.....	1	oo (grs. xv).
Olive Oil.....		
Ether.....āā	7	oo (℥j. ¼).

At times a 5 per cent. solution of the drug in oil of sweet almonds was used. He generally injected not more than a hypodermic syringeful at a sitting, though he has injected two to three, or even four ccms. into different portions of the growth at the same time. They were made every two to five days, rarely every day and not infrequently every eight days. No disagreeable symptoms were noticed to follow. The total number of injections varied between three and sixteen; out of fifty cases he deduced seven as an average; with a medium period of treatment of three to four weeks. Out of eighty-seven cases the final results were: In fifty-one decided decrease in size; in twenty-six slight diminution of the circumference of the neck; and out of eighty-seven cases in seventy a result was obtained. In about forty he could confirm the permanency of the result after one to one and a-half years. Soft goitres are best treated in this manner.

FETID DIARRHŒA IN CHILDREN.

In *L'Union Medicale du Canada*, No. 10, 1894, for the fetid diarrhœa of children, the following formula is spoken of highly:

Calomel.....	grs. jss.
Sulpho-carbolate zinc.....	℥i.jss.
Subnitrate bismuth.....	℥i.j.
Pepsine.....	grs. xxx.

Twenty powders. Three per diem for a child of one year.

Albuminuria, Casts and Bright's Disease.

Shattuck (*Boston Medical and Surgical Journal*), has examined the urine of patients seeking his advice for various ailments. He has used boiling with additions of nitric acid and the Heller test, and considers them the most satisfactory.

He concludes his article as follows:

(1) Renal albuminuria, as proved by the presence of both albumin and casts, is much more common in adults quite apart from Bright's disease or any obvious source of renal irritation than is generally supposed.

(2) The frequency increases speedily and progressively with increasing age.

(3) This increase with age suggests the explanation that the albuminuria is often an indication of senile change.

(4) Though it cannot be regarded as yet absolutely proved, it is highly probable that faint traces of albumin and hyaline and finely-granular casts of small diameter are often, especially after 50 years of age, of little or no practical importance.

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SATURDAY, MARCH 2, 1895.

EDITORIAL.

AN OVERCROWDED PROFESSION—THE SUPPLY OF PHYSICIANS.

Dealing with the general law of demand and supply in its bearing on the American medical profession, we have shown that the profession is certainly liable to the operations of ordinary economic laws, and that the demand for medical services has been lessened by the efficient enforcement of sanitary measures and by the growing popular appreciation of practical hygiene. We may add that the radical surgery of modern times has relieved a large number of chronic invalids; most of them having been cured, a few having succumbed to shock.

According to the Physicians' Directory, there are several New England towns of from five to ten thousand inhabitants, with not more than one physician per thousand of the population. But these towns are, for the most part, suburbs of cities in which the rate is much higher. Horace Greeley's advice to young men to "Go West," can scarcely be followed by the young doctor, for, in many Western towns the ratio of physicians to the total population is 1 : 300, or even 1 : 200. These towns, however, are manifestly health resorts with a relative excess of invalids, including not a few physicians who are fighting tuberculosis, chronic rheumatism or some other ailment in their own persons, and endeavoring, at the same time, to earn part of their expenses.

The total population of the United States and Canada, practically united so far as our subject is concerned, is about 70,000,000. This population is supplied by a profession of between 140,000 and 160,000. As this number probably includes many who are only nominally in practice, the actual practitioner can count on an average clientage of about 500 or, perhaps, 600.

The population is increasing at the rate of about a million yearly, so that, without increasing the ratio, about 2,000 members may annually be added to the profession. Moreover, the death-rate of medical men,

25.5:1000, causes an annual depletion of our ranks to the number of 3,500. Thus, there is the nominal demand for the graduation annually of 5,500 students.

From figures quoted in the *Journal of the American Medical Association*, it is gathered that the number of medical students in the United States and Canada is about 20,000, of whom, let us say, 6,000 are in the graduating classes, whether the schools require two, three, or four years of study. So far as personal observation warrants, we should estimate that about 90 per cent of all aspirants are graduated. Undoubtedly, the smaller and poorer colleges—poorer in a double sense—rarely have the courage to "pluck" a student, but colleges of high grade sometimes reject at the final examinations as much as twenty per cent. of the class. These figures show that, if not actually increasing, the supply of doctors fails to respond to the diminishing demand.

It must be remembered, also, that there are many practitioners of medicine to be considered in an economic study, who would be ignored in professional records; and that while it is comparatively easy to obtain accurate reports from the better class of medical schools, there are diploma-mills and schools that are legally but not educationally qualified, from which it is impossible to get reliable information.

We believe it may safely be concluded that while the absolute ratio of the numbers of the profession to the total population is nearly stationary, the output of the medical colleges is in excess of the constantly decreasing demand, and that harder and harder times are in store for the profession unless some efficient remedy be found to check the evil. This brings us face to face with an issue between the welfare of the whole profession and that of the medical colleges; an issue of such importance and complexity that special consideration must be given it.

ABSTRACTS.

CASTRATION FOR SENILE HYPERPLASIA OF THE PROSTATE.

This subject was first brought forward at a meeting of the American Surgical Association in a most complete and suggestive essay by Dr. J. William White, of Philadelphia, published in Vol. XI of the *Transactions*, p. 167, sqq., 1893. After a most exhaustive review of the literature of prostatic enlargement, the author dealt with the present position of surgery in regard to its treatment, entering fully into the various operative procedures that have been from time to time recommended either for its relief or permanent cure. A short account of the development of the bladder and prostatic portion of the urethra was given, and reference made to the analogy first pointed out by Velpeau, and subsequently emphasized by Sir Henry Thompson, between uterine fibro-myomata and the so-called "prostatic hypertrophy." Dr. White's attention was further drawn in this direction by the observations of John Hunter on castration in the bull, in which he found, as the result of the operation, that the prostate from being "soft and bulky" became "small, flabby, tough and ligamentous."* Similar results in other animals were recorded in a paper published by Dr. Joseph Griffiths in the *Journal of Anatomy and Physiology* for 1890. While Dr. Griffiths' paper was primarily written with the object of proving that the prostate is in its essential significance a sexual and not a urinary organ, he in it incidentally alluded, as part of his case, to the effects that re-

* Hunter does not explain in his remarks how an organ can be "tough and ligamentous," and at the same time "flabby." Perhaps we must excuse a little looseness in the use of qualifying adjectives.

sulted from castration in eunuchs, dogs, cats, pigs, bullocks, sheep and horses. "'The behaviour of these accessory sexual glands" (*i.e.*, the prostate), he writes, "after the removal of the testes will, I think, enable us to decide whether, on the one hand, they are developed in relation to the generative function, and entirely owe their existence to the generative stimulus, or, on the other hand, whether they arise independently of the testes and are essentially developed in functional relation to the urethral, and serve to produce a secretion which has for its purpose the moistening of that channel."* The results of Dr. Griffiths' observations went entirely to prove the former hypothesis, and he found in all the cases of castration in these animals considerable diminution in size of the prostate gland with marked atrophy of its grandular and muscular elements, only traces of the former being left as islets amid dense bands of fibrous connective tissue. These observations were strengthened by cases previously published by Gruber and Bilharz showing the results on the prostate produced by castration in men.

Arguing then from these two postulates—1st, That the "growth, or growths, which made up the enlargement in prostatic hypertrophy, are analogous to those fibro-myomata so frequently found in the uterus," and if so the results of castration ought to be similar to those observed to follow oöphorectomy in the case of the uterine growths; and 2d, That the recorded evidence in man and animals showed a decided shrinking of the prostate gland to be one of the constant results of castration; Dr. White instituted a control series of experiments in dogs as a preliminary to the adoption or suggestion of castration as a surgical procedure in these cases of senile enlargement of the gland. Thirty-five dogs and their prostates were weighed, and the average weight—15.37 gr.—was taken as the standard. Dogs were then castrated and killed at varying intervals, and the prostates were carefully examined both macroscopically and microscopically. The results obtained were striking. In every case, even much sooner than was anticipated, there was a marked and rapid decrease in the size of the gland, associated with a diminution in weight of from 15 to 2–4 grams. At the same time it was found microscopically that there was an almost complete atrophy of the glandular and muscular elements, the glandular suffering first and most markedly. Hence, as the result of these experiments, and of the evidence very briefly reviewed above, Dr. White thought himself justified in at least suggesting operation in suitable cases, and put forward these two propositions:—

"(1) Does the evidence warrant us in believing that castration in cases of hypertrophied prostate would be followed by a disappearance or diminution of the growth?

"(2) If so, is it likely that the fact can ever be taken advantage of as a therapeutic measure?"

Naturally Dr. White's somewhat revolutionary and revulsive proposal was provocative of much discussion, and an answer to his second question was not long in forthcoming. As the subject is only in its infancy, and anything that throws light on it is at once helpful and instructive, a brief summary of all the recorded cases is here appended:—

Cases I. and II.—Ramm (*Centralblatt f. Chirurgie*, No. 35), operated in April, 1893, on two cases with the most encouraging results, as he reports so marked an improvement as to amount to a practical cure in both cases.

III., IV., V.—Haynes of Los Angelos, California, reports in March, 1894, three cases operated on in December, 1893. The first case was of two years standing; symptoms apparently not very severe; cured. The second was a bad case which required catheterism every two hours, in addition to which the patient had contracted the morphine habit in order to obtain relief from his intolerable sufferings. The cystitis was extreme. Results: Cystitis cured; catheter only necessary four or five times daily; complete recovery from morphinism, and marked improvement in general health. The third case was one in which the disease was in an early stage, but on account of the peculiar conformation of the prostate catheterism was impossible. The result was a complete cure.

It may be mentioned here that in one additional case Haynes, as an alternative measure, performed section of the vasa

* Loc. cit., p. 32.

deferentia, but without any alleviation of the symptoms. This is interesting in connection with a case in which Mr. Reginald Harrison, though strongly urged by his patient to perform castration, temporised by performing ligature of the vasa deferentia, and although the patient was alive several years after the operation, and reported "well," no details are given as to the condition of the prostate gland."*

VI.—Dr. F. Smith, of Florida, operated on a very extreme case of prostatic obstruction, with bad cystitis. Fifteen weeks after the operation the cystitis was cured, urination was normal, and the patient had gained forty-five pounds in weight.

VII.—Dr. J. W. White, Jan., 1894. —In this case there was intense cystitis, all the urine being passed by the aid of a catheter and extremely offensive. The prostate was the size of an orange. Fourteen weeks after the operation the prostate was reduced to its normal size, and the urine was normal in every respect, but the power of emptying the bladder had not up that period been regained. Further details of this case are wanting.

VIII.—This case, operated on by Dr. Powell, hardly comes within the true category of these we are considering, as the operation of castration was performed for a totally different cause. It was, however, followed by complete relief of the symptoms due to prostatic enlargement.

IX.—Mayer, in May, 1894, operated on a man, aged seventy, with cystitis, ammoniacal urine, tenesmus, and toxæmia, in whom catheterism was rapidly becoming impossible on account of pain and the size of the growth. Three weeks after the operation the urine was nearly normal in character, and the prostate was dwindling in size. Six weeks after operation the prostate had shrunk to its normal size, and the bladder was able, unassisted, to completely evacuate its contents, no catheter being used.

X.—Mansell Moullin reports a case in a man aged eighty-one, for whose relief supra-pubic aspiration had been several times called in requisition. After castration the improvement was immediate. In ten days the prostate was appreciably smaller, and in three weeks it had "practically disappeared." The bladder had begun to regain power, and the urine was nearly normal.

XI.—Thomas reports a case of fifteen years' standing, the patient being sixty-five years of age. There had been considerable distress before the operation, and after it there was considerable improvement, the patient only requiring to urinate three times a day. This case is very meagre in its details.

XII.—This case is reported by Dr. Ricketts. The patient was seventy-four years of age, and had suffered for some time. Improvement followed the operation almost immediately, the patient stating he had not had such ease for a year; he could sleep for four hours at a stretch, whereas formerly he had been compelled to get up every hour or oftener, micturition being necessary about thirty times daily.

XIII.—The last case on our list is only reported in the *British Medical Journal* of January 5, 1895, by Mr. Swain. The patient was seventy-three years of age, and had suffered for five years from prostatic obstruction. Catheterism became impracticable, and as a last resort castration was performed. Three weeks after the operation a perceptible diminution in the size of the prostate was noticed; "but in the third, fourth, and fifth weeks the increasing atrophy appeared to

*Meyer (Annals of Surgery, July, 1894), describes a case in which he ligatured the internal iliac arteries (Bier's method) for hypertrophied prostate in a man aged fifty-five, who had had marked urinary trouble for over four years, and whose urine was purulent. Twelve hours after the operation the patient passed urine voluntarily for the first time within six months. There was marked atony of the bladder, yet continuous retention never set in again. The prostate became smaller, and the length of the urethra became reduced from 23½ to 21½ centimetres in six months (B. M. J. Supplement, August 18, 1894). It may here be mentioned that in the discussion which took place on Dr. White's paper at the meeting of the American Surgical Association, Dr. J. Ewing Mears, of Philadelphia, suggested the alternative procedure of ligaturing the vasa deferentia. Dr. Mears further read a paper on this subject before the Philadelphia Academy of Surgery in November, 1894, (MEDICAL AND SURGICAL REPORTER, December 15, 1894) advocating this procedure as an alternative mode of treatment in extreme cases of hypertrophied prostate, and urging that it was applicable in these cases where patients had a sentimental repugnance to castration. We do not see the difference, from a psychological point of view, between producing impotence by ligature of the vasa deferentia and by castration, and moreover, from the surgical point of view, we have yet to receive evidence as to the benefit of ligature, as those cases in which it has been tried hitherto have yielded none or negative results so far as the prostatic disease was concerned.

progress more rapidly. . . At this time his general condition had much improved; his urine was normal—he sometimes passed half a pint at a time—but he could not hold his water for more than four or five hours in the daytime. There was no 'residual urine' in the bladder." The prostate meanwhile had diminished from the size of an orange to that of a large horse chestnut. Thirteen weeks after the operation the prostate was still smaller and firmer; the patient was able to dispense with a catheter, and did not require to get up at night to pass water; and the urine had completely returned to its normal characters. There was no cystitis.

These cases—all on record up to the present time—certainly form a striking object-lesson in the treatment of this most distressing of all the surgical complaints to which old age is liable. So far, it must be admitted, the results are encouraging. The strongest objection to the operation appears to be the sentimental one. But few healthy-minded men will, we imagine, object to the removal of appendages which have long ceased to be useful, when weighed in the balance with the life-long misery and torture caused by prostatic enlargement. It is only those who are the victims of a *psychopathia sexualis* who will preserve the reminiscences of past virility at the cost of a present and future bodily and mental enfeeblement. As Dr. White justly observes in summing up his remarks:—"There will be no lack of cases willing to submit to an operation almost painless, with a low mortality, and followed by no such unpleasant conditions as accompany persistent fistulous tracts, either supra-pubic or perineal, even although the operation carries with it the certainty of sacrificing whatever sexual power has survived the excessive, and often intolerable, suffering of such patients.—*Dublin Journal of Medical Science.*

ON THE TREATMENT OF ACNE COMMUNIS.

One of the most common diseases of the skin in San Francisco is acne communis. It is due, apparently, to the dusty streets and to the inferior sanitary conditions in general of the city. It is a great deal more frequent among women than men, especially among women between the ages of 13 and 20.

The acne is secondary to the comedo, the latter being an accumulation of sebum at the mouth of the sebaceous duct, the duct probably being plugged up by particles of dust, soot, etc. This comedo acts as a foreign body and produces the acne. Our first duty is to prevent the formation of the comedos, for in doing this we also prevent the acne. Applications of soap, as generally used, seem to have an injurious effect on faces predisposed to comedo and acne, their action being to remove the upper layers of the epidermis and to expose the ducts of the sebaceous glands. The treatment is first to remove as much as possible by a mechanical process, with the comedo expresser, the comedo, and apply adstringent lotions and ointments. The treatment of acne should aim to denude the surface of the acne pustule, either with a lancet or with alkaline remedies and remove its contents.

When a patient comes to me for treatment, the first remedy given is: Spirit. saponato, kalin ℥iv. Sig. Externally. A few drops are applied to a piece of flannel moistened with luke-warm water and applied several times a day. After drying the face thoroughly, the following ointment is used: Past. resorcin 3 per cent; to be applied both day and night. If necessary (where the patient has a tendency to emaciation,) a tonic is given consisting of: Elix. cinchon, ℥iv; liq. gude; syrup hypophosphite, comp., aa ℥j. A tablespoonful three times a day before each meal. This treatment will baffle, if properly carried out, almost any case of acne.—*Pacific Med. Jour.*

Alumnol as a Dressing.

Dietrich:

Alumnol	gm 10
Powdered talcum, Starch	āā gm 45

S. To be used as a powder in blister, sweating of the feet, etc.

—*Nouveaux Remedies.*

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE ANNALS OF GYNÆCOLOGY AND PÆDIATRY

for December.

Eugene Boise, M.D., of Grand Rapids, Mich., contributes a paper on

Suppression of Urine After Abdominal Section.

The author questions whether ether should be classed with other irritants of the kidneys, such as cantharides, and considers that the case is not proved. "The difficulty in forming any opinion which might be regarded as conclusive lies in the fact that when ether is used for operative purposes, other factors enter largely into the case which render conclusions as to the influence of the ether in the causation of any consequent urinary disturbances fallacious." In a number of cases he had made a careful analysis of the urine previous to operation, and of the urine drawn immediately afterward, care being taken to draw directly into a bottle, which was securely corked at once. "In all cases there was a strong odor of ether, and in nearly all cases there was a transient trace of albumen, often very slight. The color was somewhat darker than usual, and the amount greatly lessened during the first twenty-four or forty-eight hours, gradually thereafter returning to the normal." In no case could he perceive any influence on the secretion of urine which he could positively say was due to the action of ether.

We have as factors in the causation of suppression of urine after abdominal operations:

First, the direct irritation of the abdominal vessels by the mere opening of the abdominal cavity, aggravated to a greater or less extent by the more or less severe reflex irritation of the renal plexus by injury to other parts of the abdominal sympathetic.

Second, that condition known as shock in which the contraction of the renal and other abdominal arteries exists conjointly with general arterial contraction and consequent venous engorgement. In such cases there is not only lowered blood pressure in the renal arteries, but retarded velocity through the renal capillaries because of venous obstruction.

Third, the direct depletion of the blood and consequent lowering of the blood pressure by the removal and withholding of fluids.

Fourth, the problematical irritant effect of the anesthetic.

The indications for treatment are: First, to avoid the possible irritant effect of ether by refraining from saturating the patient beyond the point of necessary anesthesia. Too little attention is paid to this point.

Second, to replenish the blood vessels by the free administration of hot water. As the water cannot of course be given by the mouth, the author prefers to give it by the rectum, because: First, the water is rapidly absorbed, easily retained, and comparatively painless; and second, it brings the soothing effect of heat almost directly to the renal and solar plexuses, thus greatly aiding in allaying irritation and relaxing arterial spasm. To fulfill this indication, it is necessary that the water should be hot rather than merely warm. For this reason also the rectal is to be preferred to the subcutaneous use of water.

He regards this use of hot water as of very great benefit in the treatment of threatened or existing suppression, and now almost invariably directs its use immediately after every abdominal section unless there is some special contraindication.

The treatment of the arterial contraction, by which the amount of blood carried to the kidneys is lessened, should be by arterial relaxants, chief among which are codeine and nitro-glycerine (aided, perhaps, later by pilocarpine.) He prefers codeine to morphia on account of its freedom from nauseating and constipating effects. When the renal arteries are in a state of unnatural contraction by reason of irritation of their vaso-motor nerves, codeine, by its sedative action allays the irritation, relaxes the spasm and restores the blood current through the kidneys to its normal condition.

Denslow Lewis, M.D., Gynecologist and Obstetrician to the Cook County Hospital, Chicago, writes of

The Injurious Effects of Pessaries.

After detailing some of the various ill effects of pessaries, he says: "My experience with pessaries during the past ten years has consisted solely in their removal. Some form of the Alexander operation, the operation of colporrhaphy, perineorrhaphy, trachelorrhaphy, hysterorrhaphy and in a few cases hysterectomy—singly or combined, according to the requirements of each individual case—have sufficed in my experience and that of my assistants to control all displacements of the uterus, as well as all inconveniences occasioned by them." He, however, does not think that the pessary should be entirely banished as there are cases where the judicious use of the instrument is capable of much good. "The physician who inserts a pessary should, however, realize its powers for evil as well as good. He should insist on frequent examinations; he should be on the alert for the possibilities; he should remember that deviations of the uterus have not the importance that was attached to them twenty years ago; he should remember that the inflammatory conditions of the tubes and ovaries frequently cause a prolapse of these organs into Douglas' *cul-de-sac*, and, that eminent gynecologists to-day do no hesitate to assert

that cases of so-called retroflexions of the uterus are all of them really tubes or ovaries often bound down by adhesions behind the uterus. These facts should be remembered by every practitioner, and he should further understand that a pessary, if suitably applied, causes relief and not distress. In case the patient complains of sensations of pressure or of other inconveniences, the possibility of incorrect adjustment or improper application should not be forgotten. Above all things the patient should be instructed in the care of the pessary. It should be remembered that she carries in her vagina a foreign body which requires attention. At suitable intervals it should be removed, cleansed and disinfected, and the opportunity should be utilized to ascertain the benefits or injuries occasioned by its use. The vagina should be regularly and systematically douched, not alone to disinfect the parts, but also to remove the excess of secretion resulting from the presence of the pessary. These measures are easily carried out in private practice. In hospital, and especially in dispensary practice, they are impracticable, as a rule, and for this reason, if for no other, the pessary should, in my opinion, be rarely advised in such cases."

Dr. Herman E. Hayd, of Buffalo, presents the "Report of Two Cases of Extra-Uterine Pregnancy. Operation—Recovery."

The editorial in this issue is on "The Dangers and Results of Symphysiotomy."

In the department of Pædiatry. Charles Greene Cumston, M.D., contributes a paper on

The So-called Idiopathic Purulent Peritonitis in Children.

The author believes that idiopathic peritonitis is commoner in infancy than in adults. "As to the terms of idiopathic or essential purulent peritonitis of children, they only signify that it is not due to perforation of the intestine or appendix or to tuberculosis. When these two great classes of peritonitis are eliminated we are in the presence of a doubtful and uncertain etiology, but one which bacteriology is clearing up, and it is only a question of time before cold, etc., will be put aside as a cause and something definite found."

THE AMERICAN JOURNAL OF OBSTETRICS

for January.

H. J. Boldt, M.D., Professor of Gynecology at the New York Post-Graduate Medical School and Hospital, etc., contributes an article on

Vaginal Extirpation of the Uterus and Adnexa in Pelvic Suppuration and Septic Puerperal Metritis and Peritonitis.

The author argues that if there is sufficient disease present to justify the removal of the appendages the uterus should be removed as well. The cause lies in and about the uterus. For this reason so many women are unrelieved after the removal of infected tubes and ovaries. The author pleads for this method of operating in the bad cases, as in those there is the necessity for drainage and in consequence there is the danger of a subsequent hernia in the site of the drainage tube. By the vaginal method all drainage is per vaginam and there is therefore no danger of hernia. He also maintains that there is less risk of intestinal adhesions by the vaginal method and that there is no more risk of intestinal obstruction than in abdominal section; and, as his experience has thus far shown, the remote dangers are *nil*. There is less traumatism and exposure of intestines in the vaginal method and the danger of contamination of the general peritoneal cavity with septic material and its dissemination is practically *nil*. If a pus sac is opened per vaginam the contents flow down and out according to the law of gravity; the intestines very rarely come in contact with pus, but should they, there is no possibility present of the septic material spreading, as is the case when enucleating or opening pus cavities per abdomen. The duration of convalescence he also claims is greatly shortened and he states that it is the rule for patients to be out of bed within a week.

In simple pelvic abscess he advocates the operation of vaginal incision and drainage.

His conclusions are that the removal of the uterus and adnexa for bilateral disease of such extent that both appendages must be sacrificed, as ascertained by the history and examination, is preferable to the abdominal operation, on account of the more favorable immediate and remote results. That it is more logical to expect a favorable termination from vaginal hysterectomy in acute puerperal septicemia and septic peritonitis, if the uterus be the causative factor of the poisoning, than from abdominal salpingo-oophorectomy with flushing and drainage of the peritoneal cavity.

A. Palmer Dudley, M.D., Professor of Gynecology in the New York Post-Graduate School and Hospital, etc., discusses

The Technique of the Cæsarean Section.

The author believes that the long incision of the abdominal walls with subsequent turning out of the uterus before opening it, adds to the risk of the operation, and instead uses a six inch incision, extending from a point one and a half inches below the navel to within an inch and a half of the pubic bone. The hand and forearm are then introduced through the incision and swept about the uterus to note the position of adhesions, should they by chance exist. A loop of elastic cord is then quickly carried through the incision, over the fundus of the uterus and down to the cul-de-sac behind it, the ends of which are given to an assistant who makes steady traction upon them, thus holding the uterus against the pubic arch. This cuts off the blood supply from the uterus and prevents hemorrhage and also prevents the leakage of amniotic fluid, and acts as an assistance in delivering the uterus through the abdominal incision as the child is being delivered from the uterus. The uterus is then quickly incised along its anterior surface

without regard to the position of the placenta, until the fetal sac is reached. During this procedure a second assistant makes firm pressure upon the abdominal walls from above downward and forward, his duty being to hold the upper portion of the uterus firmly against the abdominal incision; as the child is being delivered he gradually presses the uterus out of the abdomen through the incision as it contracts upon itself. All this is done under constant irrigation with hot boiled water.

The author is indifferent as to the position of the fetus, delivering that portion of the child which first presents through the incision.

The author advocates the use of a continuous catgut suture in closing the uterine wound. After the child has been delivered, and while the placenta is separating, the uterine cavity is irrigated with hot bichloride solution, 1:5000. Still continuing the irrigation, the uterus is closed with three rows of catgut sutures used as a continuous stitch; the first row beginning at the inner edge of the upper angle of the incision and including the decidua and inner muscular coats of the organ. This row of sutures is continued to the lower angle of the incision under irrigation, and when drawn together they close the uterine cavity. Without cutting or tying the catgut the second row is carried back to the upper angle of the uterine incision, including the various layers of muscular structure and uterine sinuses, care being taken to pass the needle through the cut extremities of all the sinuses that are visible. By these two rows of sutures three-quarters of the depth of the uterine structures have been brought into close opposition and both layers of sutures are buried; while the third and last row of sutures must close the peritoneal surface of the uterus and are not completely buried, but, without cutting the catgut, the stitch is inserted so as to allow it to just appear on the peritoneal surface of the uterus, the over and-over stitch being continued from above downward until the suturing is complete and the catgut tied at the lower angle of the incision. When this has been completed the constricting elastic cord is removed and the circulation allowed to resume. The abdominal incision is then closed with three rows of sutures, two of catgut.

The author believes in the elective operation, fixing the date of operation at least four or five days previous to the expected time of natural labor.

If possible chlorotorm should be administered in preference to ether, as the rapidity in bringing the mother under the influence of the anesthetic is quite essential to the well-being of the child.

"Bicycling for Women From the Standpoint of the Gynecologist"

is the title of a paper by Robert L. Dickinson, M.D., Lecturer on Obstetrics and Obstetrician to Long Island College Hospital, etc. The author gives this summary of his views: "Under proper conditions of costume and posture, with care that the exercise be gradually increased and properly graded for the individual case, and where there is no acute inflammation to contra-indicate it, bicycling will probably show itself capable of large results as an agent in curing pelvic disorders, since it is one of the few exercises which attract women.

"In view of women's disabilities, and the disadvantages which she has suffered in attempts to obtain interesting and beneficial muscular exercise, it seems hardly too much to say that the promise from bicycling is far-reaching. Through it and the habits it will engender we look for better dress, freer dress, shorter dress in bad weather; for better exercise, for out-of-door activity, for steadier nerves, stronger muscles, painless periods, easy labors."

The author denies that there is any sexual excitement produced if the saddle used is properly made and properly fitting.

The remaining papers in this issue are:

"Pelvic Massage in Gynecology." By W. H. Rumpf, M.D., Chicago, Ill.

"Restoration of Intestinal Continuity without Mechanical Devices." By W. E. B. Davis, M.D., Birmingham, Ala.

"Inter-polar Application of Electricity of Low Amperage in the Treatment of Uterine Fibroids." By Josephus Henry Gunning, M.D., New York.

"Sarcoma of Ovaries." By A. H. Cordier, M.D., Kansas City, Mo.

Calomel.

To remove obstructions, promote absorption, stimulate and correct the secretions and give new vigor or tone to the entire digestive and circulatory apparatus, Daughton uses a formula somewhat as follows:

Calomel	60 gr.
Powdered socotrine aloes	10 gr.
Rhubarb	15 gr.
Powdered columbo	10 gr.
Powdered cloves	5 gr.

Make 60 pills and give 1 every 2 or 3 hours until the stools are bilious, *i. e.* black, glistening and tarry-looking.—*Southern Practitioner.*

Pleasant Laxatives.

Every physician has felt the want of a pleasant purgative for children. Dr. C. H. Smith writes to the *Columbia Medical Journal* that the following formula has been used by him for years:

Glycerine	ʒj.
Ol. cinnamon	gtt. vj.
Trit. ben et adde Ol. ricini	ʒi.

M. S.—ʒj at a dose p. r. n.

For chronic constipation Dr. Delafield prescribes the following pill:

Strychniæ sulph	gr. 1-40.
Ext beladonna Pulv. ipecac Ext. colocynth co	gr. ¼.

M.—Ft. pill No. i.

Sig.—Four pills daily at first; then three and afterwards two.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Technique of Making Urethral Injections.

Guiard (*Annales des Maladies des Organes Genito Urinaire,*) gives the result of his investigations concerning the urethra and its medication. The capacity of the urethra had been stated by Jarmin and Leprevoct to be from five to eight gramms, therefore it was held that a urethral syringe should not hold more than five or six gramms, equal to about one and a half drachms. Later it was shown that posterior urethritis, particularly late in the disease, was far more frequent than was formerly supposed. The author by experimenting in the living subject found that the urethra would always hold eight to ten gramms (two to two and a half fluid drachms,) and more often twelve to fifteen grammes, and sometimes sixteen to seventeen. As the patient could tell when the sphincter was forced, this was avoided. These deep injections are only called for when definite symptoms have already demonstrated that the posterior region of the urethra is already affected.

In order to administer these deep injections the author uses a syringe of twenty gramms (five drachms) capacity. When it is desired to overcome the sphincter, gentle pressure is made when the liquid will enter. In an experience of ten years he has never had any accidents, and only encountered one case in which the sphincter would not relax. It is better to give the injections when the patient is lying down than when he is standing up. The requirements of an effective injection is that is shall reach the diseased parts. To do this a syringe of twenty gramms (five fluid drachms) capacity should be used, and the injection of its entire contents, if carefully done, is easy and causes no inconvenience.—*Univer Med. Mag.*

Ingrowing of Nails.

Ingrowing nails, or *ongle incarne*, as the French call it, is, as is well known, a very painful affection, and unfortunately, the operation necessary for its cure is often dreaded by the patients, although local and general anesthetics are employed to render the avulsion as painless as possible. A very simple method has been frequently employed by a *confrere* with constant success. It consists in painting the offending portion of the nail with a warmed 40 per cent. solution of caustic potash. In a few seconds the upper horny layer is rendered so soft that it can be easily removed by a piece of broken glass used as a scraper. The application of the solution and the scraping is continued until nothing but an exceedingly thin portion of the nail remains, which can be easily removod by a small scissors. The patient can now be considered cured, without having lost a drop of blood nor felt any pain.—*Paris Cor. Med. Press and Circular.*

Value of Combinig Heart Tonics.

Convallaria majalis is a simple cardiac tonic and safe remedy, in action similar to digitalis, but not so marked; it causes slowing and increases the force of the heart beats. But it will frequently be found in lessening compensation, that convallaria, strophanthus and digitalis individually fail or disappoint after a time; and that a combination of all three often produces an effect little short of marvelous. Once or twice in recent years I have been called in consultation over cases of advanced mitral disease, in which central failure has shown itself by extensive dropsy of the limbs, oedema of the lungs and liver, and a general water-logged condition of the system. On inquiry as to the exhibition of digitalis, the reply has been, "He has had it," with perhaps a like response as to strophanthus and convallaria. But they had not been given collectively; and when this was done, benefit speedily accrued to the patient, and credit to his medical advisers.—*The Clinical Journal.*

The Value of Mercury and Iodide of Potassium in Ophthalmic Syphilis.

M. Chibret, after 19 years of practice, believes that iodide of potassium has no specific value in the treatment of ophthalmic syphilis. 1. In ophthalmic syphilis, mercury alone always is effective; iodide of potash alone never is. 2. In general syphilis mercury alone acts almost always in all cases: iodide of potash alone on almost none. 3. In all cases of syphilis mercury alone is the touchstone to guide one in one's diagnosis. 4. Mercury, the specific for syphilis, is at the same time poison to the whole organism, and especially the nervous system. 5. Iodide in syphilis is often indicated to counteract the invidious effects of the mercury. 6. Iodide acts on lymphatic glands and rheumatism. 7. Severe syphilis is only affected by mercury or mercury in combination with iodide of potash. Iodide has not the local action that mercury has, but aids the patient to withstand the mercury treatment. The only thing to fear in the combined treatment is diarrhœa; when this appears stop treatment to continue it later in smaller doses. Iodine is only useful in those cases where a saturation of mercury is necessary. In other cases it is useless, even harmful for it diminishes the therapeutic action of the mercury.—*The North American Practitioner.*

SURGERY.

Torsion for Rectal Incontinence.

A recent paper of Dr. Gerster on this subject is interesting as furnishing additional information respecting the method reported by Gersuny, of Vienna, for the treatment of rectal incontinence described in detail in a previous report. The incontinence may be due to congenital absence of the sphincter ani, to paralysis of the sphincter from spinal lesions, or surgical injuries due to traumatism or operation. Gerster has used torsion with success to relieve incontinence. He rotates the free end of the gut around its own axis so as to arrange the folds of mucous membrane in spirals. The twisted gut is then sutured to the edges of the external wound. The amount of torsion is gauged by the amount of resistance felt by the index finger on introduction. He did not in two cases make more than one complete twist, but more than one revolution might be required when the freed end of the rectum was long, that is, when five to six inches had been excised and the end drawn down. If not twisted at once, the operation of torsion must be delayed till the rectum is fixed in a mass of granulations to the surrounding soft parts. It is then dissected clear for two or three inches, and twisted till the necessary resistance is obtained. Which method is preferable is not yet known. Gerster has never performed torsion immediately after extirpation, only after dissecting out the rectum, the proximal end when the dissection ended being fixed firmly when torsion was made.—*Boston Medical and Surgical Journal.*

"When in Doubt Operate."

The silly and ignorant crusade against what people are pleased to call vivisection seems to be joining handle with an even more silly and ignorant attack on life-saving surgery. To show the depths to which it is possible to descend, the old aphorism, "when in doubt, operate" has been twisted from its meaning, and paraded before the public as an illustration of the awful hankering after operation which is supposed to permeate and degrade the surgical mind. It would be difficult to imagine a greater perversion of truth than is conveyed in the suggestion that, in such a case of doubt as is there meant, the operation would be undertaken for the surgeon's instruction rather than for the patient's good. In case of hernia there can be no more life-saving rule than this of operating, if there is any doubt as to whether it may not be strangulated It was an aphorism derived from experience long before operations had the safety now given them by antiseptics; how much more should it hold true now. To give the patient "the benefit of the doubt" means to give him the benefit of the operation, and none but those who know nothing of the subject could have founded on the phase an argument against the tendencies of modern surgery.—*Brit. Med. Jour.*

Nitrate of Silver in Acute Inflammation.

Dr. Carrick in *The American Practitioner and News* draws the following conclusions:

1. That nitrate of silver is not as dangerous in acute urethral inflammation as is generally supposed.
2. That by beginning with small doses and increasing daily a tolerance can be established (the same as in chronic cases).
3. That when the discharge becomes very slight, it is better at times to decrease the strength of the nitrate of silver than to increase it.
4. That in cases of gonorrhœal cystitis, which are usually acute, good results are obtained by instillation of this drug.
5. That in cases of chronic, deep urethral inflammation, especially those of a granular nature, deep urethral injections are the remedy.
6. Nitrate of silver, as an abortive, should not be used, as in doing this peri-urethral inflammation may be set up, which might cause considerable harm.

Dr. W. Ross Martin reports a number of cases illustrating the value of Catterell's method in sprained ankle, which has the indorsement of Prof. Gibney. It consists in cutting strips of adhesive plaster about one-half inch in width and long enough to completely encircle the foot. Then with the foot still raised, it is strapped, ankle and lower leg included as you would an ulcer; the first strip passing over the outer side of the foot, down near the base of the little toe. It is placed obliquely, so that the next strip shall cross this; one end beginning under the heel and terminating under the ball of the great oe. The third overlaps the first about one-half, and is snugly applied, while the fourth overlaps the second in the same direction, aud so on until the foot is completely covered, including ankle and lower third of leg. It is, when finished, practically a Scultetus bandage. Over this a bandage of cheese cloth is applied and the patient allowed to walk about.—*Omaha Clinic.*

A Case of Laryngectomy by a Novel Method.

Dr. H. L. Swain reports the case of a laryngeal epithelioma removed by a new method. A sponge Trendelenburg canula was introduced into the trachea. The skin was incised from the sternum to the hyoid bone with a cross cut to the sterno-cleido mastoid. The larynx was carefully laid bare and bleeding checked. When all was cleared away, a director was carefully passed back of the trachea, between it and the esophagus, and the larynx severed from the trachea. The larynx was carefully dissected away from the anterior wall of the esophagus, from below, upward. When the arytenoid cartilages were reached, the direction of the incision was changed and directed toward the base of the epiglottis, including in its path the mucous membrane covering the aryte-

noids and portions of the ary-epiglottic folds. The epiglottis was cut through the tuberculm, and the larynx soon freed from all attachments. The epiglottis was then stitched to the posterior border of the opening, which had been the rima glottidis, and closed the ring completely, thus bringing the epiglottis in contact with the arytenoid mucous membrane, converting the ring into a linear wound running from side to side. The wound was united by continuous catgut sutures. A few strong sutures were introduced into the upper end of the trachea to prevent its slipping down. The result of this operation gave the following advantages over the older methods of operating: 1. The danger to life from inspiration pneumonia was very much less, owing to shutting off the mouth. 2. The patient can swallow as freely as usual. 3. The most wonderful of all, in at least three of the cases, similarly operated, a useful voice, fully as satisfactory as with an artificial larynx, was obtained and without the trouble that this latter entails. The possibility of recurrence by the irritation of the foreign body—the artificial larynx—could also be avoided. 4. There is less disfigurement than when wearing an artificial appliance. The author followed this method from seeing a patient that was presented by J. Solis-Cohen, who was able to talk easily and audibly with no communication from the pharynx and trachea.—*New York Medical Journal.*

Specific for Gonorrhœa.

A new specific for Gonorrhea is a one per cent. solution of creosote in decoction of hamamelis combined with boric acid. It is claimed that this will destroy the gonococci in two hours.—*Pacific Med. journal.*

When to Operate in Appendicitis.

Dr. D. A. K. Steele, of Chicago, in the *North American Practitioner* says:

My conclusions in regard to the indications for operation in appendicitis may be summarized as follows:

1. In cases where there is persistent pain, tenderness, temperature, increasing pulse, increasing tumor and progression of the disease.
2. In all cases where pus is present.
3. In all cases where salines and flushing of the colon does not give prompt relief.
4. In recurrent or relapsing cases in the interval following an attack.
5. Whenever the appendix is found diseased.
6. Whenever the appendix is found diseased during a laparotomy for any other condition it should be removed at the same time.
7. Operate immediately in all perforative cases.
8. Operate in all gangrenous cases.
9. Operate early and thus lower the mortality which is less than eight per cent. during the first week and over seventeen per cent. during the second week in cases operated.

2920 Indiana avenue, Chicago.

Appendicitis.

Dr. Dudley P. Allen, in a paper read before the Ohio Medical Association at Zanesville, wherein he reports thirty operations for appendicitis during the year with one death, submits the following conclusions:

1. Though many cases of appendicitis may recover without surgical aid, it is by no means an easy matter to distinguish these from those which are more serious, and it is of vital importance if surgical counsel is to be summoned it should be called before the disease is so far advanced as to render the operation hopeless.
2. Operations for appendicitis, though often easy, are at times extremely difficult, requiring the skill necessary for the most critical laparotomy, and I think it but right to say that it would be better in many cases to trust to nature than a poor operator.
3. Careful examination will disclose the fact that many patients suffering from what is supposed to be a primary attack of appendicitis have had previous difficulty in this region; and examination of the appendices removed will demonstrate positively the existence of long standing inflammation.
4. Operations in the acute stage of a primary attack are beset with danger, and it is important they should be undertaken before the patient is in collapse, before peritonitis has become general and before the patient is thoroughly septic.—*Railway Surgeon.*

The Prolonged Bath.

Modern Medicine says that a patient in the St. Louis Hospital was recently kept immersed in a bath tub for six weeks, for the cure of a large sloughing abscess, a current of water being constantly passed through the tub. The writer has, within the last twenty years, treated many cases of gangrene, crushed limbs, slouging sores, etc., by this method, and has found better results than by any other. Its success is due to the asepsis secured by the constant immersion. The presence of a large quantity of water is not favorable to the development of pus-forming germs, so that suppuration is lessened, and at the same time the poisons resulting from the action of the disease germs are washed away. These poisons, when left in contact with the tissues, paralyze the living cells and destroy them, thus hindering the reparative efforts; but by the constant cleansing effected by contact of water kept pure by frequent renewal, the tissues are protected from the toxic influence of these poisons, and healthful repair is thus promoted.

While in Vienna some twelve years ago, the writer found patients living in tubs of water, who had been immersed for periods varying from six months to a year or more. The cells of the body are accustomed to con-

tact with moisture; in this respect they may even be compared to aquatic animals. The blood cells are carried by a current of watery fluid, and the tissue cells are all constantly bathed in this fluid, so that the contact of water with the living tissues is a condition closely analogous to that which is naturally maintained within the body.—*Food.*

Treatment of Inoperable Malignant Tumors.

Dr. W. B. Coley, New York, in a paper read before the recent meeting of the American Surgical Association, in Washington, D. C., reported twenty-five cases of sarcoma treated by inoculating the patient with the toxines of erysipelas and bacillus prodigiosus, with six cures. Nine markedly improved and eight slightly improved. Also eight cancer cases, all but one of which showed improvement. The author's conclusions were as follows:

First.—The curative action of erysipelas upon malignant tumors is an established fact.

Second.—This action is much more powerful on sarcoma than carcinoma.

Third.—This action is chiefly due to the soluble toxines of the erysipelas streptococcus, which toxines may be isolated and used with safety and accuracy.

Fourth.—This action is greatly increased by the addition of the toxines of bacillus prodigiosus.

Fifth.—The toxines, to be of value, must come from very virulent cultures and must be freshly prepared.

Sixth.—The results obtained from the use of these toxines, without danger, are so nearly, if not quite, equal to those obtained from an attack of erysipelas, that inoculation should rarely be resorted to.—*International Journal of Surgery.*

GYNECOLOGY.

Picrotoxin in Gynæcology.

Dr. F. W. Talley states ("Philadelphia Polyclinic") that certain nervous symptoms are embarrassing to practitioner and prostrating to the patient; they are found in young girls suffering with ovarian disease, but mose frequently in middle-aged women who are approaching the menopause. At this time they increase in severity and continue from two to six years, with varying intensity. The symptoms are: Flashes of heat, cold creeps, sweats, cold hands and feet, flatulence, constipation, palpitation of the heart, melancholia. The patients are easily confused, their memory is impaired, they have crying spells, avoid crowds and public places, are suspicious and brooding, flushing when addressed, have a sense of impending calamity, and are generally wretched. For the relief of these symptoms strychnine, iron, arsenic, sumbul, asafœtida, valerian, and potash bromide have been exhibited. These, with rest treatment, attention to the bowels and to hygienic surroundings, often relieve the condition. There are cases, however, especially during the menopause, in which the relief from these drugs is only slight. For these cases Dr. Talley has used picrotoxin in 1-60 grain dose, repeated three times a day with the happiest results.

Calomel Plaster in Congenital Syphilis.

In the following preparation the sodium chloride and alkaline salts of the sweat transform the insoluble subchloride to the soluble perchloride, which is absorbed and keeps up a continuous action:

Calomel	10 parts
Castor oil	3 parts
Diachylon plaster	30 parts

Four square inches of this plaster ought to contain about 18 grains of calomel. A piece about 6 inches long and 4 broad is applied, after thoroughly cleansing the skin, and is renewed weekly.—*Brit. Med. Jour.*

"Chelsea Pensioner."

Lord Anson paid three hundred pounds for the privilege of publishing the following prescription for chronic rheumatic arthritis:

Sulphur	℥ i.
Cream of tartar	℥ i.
Rhubarb	℥ iv.
Gum guiac	℥ i.
Make 1 powder and add honey	℥ xvi.

Mix well, and take 2 tablespoonfuls in a tumbler of white wine and hot water on going to bed, and repeating the dose on getting up in the morning.—*Louisville Medical Monthly.*

OBSTETRICS.

Uncontrollable Vomiting of Pregnancy.

Bonnet (*British Med. Jour.*) relates a case where the patient was 22, and single. Her first pregnancy went on to term; but, in her second, labor was induced at the fourth month in consequence of hyperemesis. During the early part of the third pregancy vomiting became very severe, lasting a month, and reducing her to an alarming extent. When just over six weeks pregnant, a laminaria tent was introduced; on January 14, 1890, the vagina was plugged with iodoform gauze. For twenty-four hours the vomiting ceased. Next day the tent was removed, and the sickness returned. On January 17, two tents were introduced as high as possible. The vomiting again stopped, returning when the tents were taken out. Then five tents were progressively introduced, and left in place for three days. The sickness stopped, and did not return. The uterus showed no signs of contracting throughout the course of the above treatment. The patient took food well and grew stout. Seven and a half months later she was delivered of a healthy child at term.

Hemorrhage in Pregnancy.

Cases (N. Y. *Med. Times*) are by no means rare where slight hemorrhage, or something resembling menstrual flux, occurs at the time for the regular catamenial period for the first two months of pregnancy, and in some cases extends during the entire period. This condition does not necessarily indicate placenta prævia, for where that exists Prayfair says that hemorrhage rarely begins before the end of the sixth month, and sometimes not until labor has commenced. Depaul, in seventy cases, says in one case only the hemorrhage occurred before the sixth month; in seven from six to seven months; in twelve from seven to eight months; in twenty-six from eight to nine months; and in twenty-four at term or near. A month before actual labor is not unusual for slight pains, resembling labor pains, to occur at regular intervals, even with the slight appearance of blood. Of course, in these cases the strictest rest should be enjoined, and, if necessary, some remedy used to check the pain.

The belief is as old as Hippocrates that hysteria is cured by marriage. But Dr. Wythe Cook finds, from his experience, that in most cases of dysmenorrhœa and hysteria among single women marriage aggravates the disease. Hysteria is by no means cured by marriage, dysmenorrhœa often returns after pregnancy.—*Amer. Jour. Obstetrics.*

Can Ovarian Dermoids be Diagnosed?

Guinard (*British Medical Journal*) denies that there is any one pathognomonic symptom of dermoid cyst of the ovary. Three signs, on the other hand, when they occur in the same patient, almost assuredly indicate this disease. These signs are pain, slow growth, and consequent small bulk of the tumor, and relative youth of the patient. Tillaux and himself have both found that these signs are reliable. Exploratory puncture is absolutely unjustifiable. Should the tumor be dermoid, puncture is especially dangerous, as the contents of a dermoid cyst are highly irrigating to the peritoneum. Guinard admits that there is one source of fallacy in his test for dermoid of the ovary. The pain may be due to torsion of the pedicle of an ordinary ovarian cyst, and as torsion checks the growth of the tumor and may occur in a young subject, diagnosis in the simplest-looking case must be reserved.

Incontinence of Urine.

Dr. White, *La Revue Medicale*, recommends the following formula in incontinence of urine in children:

Benzoate soda	āā grs xv
Salicyate soda	
Ext. belladonna	grs xxx
Cinnamon water	ʒ iv

A teaspoonful four or five times a day.

—*Canada Lancet.*

DISEASES OF THE EYE.

The Removal of Foreign Bodies from the Cornea.

Mechanics and workmen have learned from oculists (who should have taught them better) the method of removing foreign bodies from the cornea by "picking them out" with some sharp or slightly blunted metal instrument. In every factory or workshop every day, and often many times a day, it occurs that pins, knives, etc., are thus blunderingly used, frequently with great injury to the cornea, with the resultant formation of corneal ulcers, keratitis, iritis, or at least, leucomata. All text-books of ophthalmology advise the use of the "corneal spud" for removing such particles, and every young physician supplies himself with the instrument. But it is the most outrageously ill-adapted for the purpose conceivable. It is impossible for any patient to hold the eye still enough to permit any hand thus to remove a partly-imbedded grain of sand, or emery, or what-not, without wounding the epithelium of the cornea. For this purpose a rigid tool is absurd, and a rigid metal instrument is the acme of absurdity. Every physician should teach workingmen how easy it is, and how free from any danger of injury, to remove the great majority of foreign bodies on the cornea with a simple wisp of cotton. Any particle not thus removable should not be sought after with pen-knives, awls, pins, or spuds, but the patient should be sent to a physician. Twist a little wisp of absorbent cotton, having long fibres, upon itself until the fibrils are well caught, but are not too densely packed, upon each other. Fold the roll upon itself and grasp it half an inch from the rounded or curved extremity. The eyelids are held apart by the fingers of the left hand, and the patient instructed to look in such a direction as to bring the foreign body into view. By delicate, though firm pressure, the wisp of cotton is brushed, not too quickly, across the cornea, or it is given a slight twist or screw-like movement when deftly pressed against the cornea. Almost invariably the dust-particle is removed at the first trial, being entangled or caught by fibrils of the cotton. Cocaine, blepharostat, spud, time, labor and injury are all dispensed with and happily spared. The procedure may not be for the commercial advantage of the specialist, but it is worth more to the world than seven "original researches" and prize essays.—*Medical News.*

The Treatment of Ophthalmia Neonatorum.

Kalt recommends irrigation of the eye with a 1 to 5000 solution of potassium permanganate introduced through a small funnel, one end of which is placed between the eyelids and the other connected with the bottle containing the fluid, which should be placed about a foot above the patient's head. The irrigations should be made twice a day, and two quarts of the fluid should be used at each

time. If the disease is attended with serious or extensive trophic changes in the cornea, the irrigations must be used more frequently —say four times a day—and gradually lessened as the inflammation disappears. (At a recent meeting of the Ophthalmological Section of the New York Academy of Medicine, this plan of treatment was favorably commented on by Dr. H. Knapp, who had seen its application by Kalt.)—*Med. Record.*

SKIN DISEASES.

Behrend (*Berlin*) considers that the difficulty in curing pityrasis versicolor is due in many instances to the popular impression that the disease is confined to the covered portions of the body, and that the disease on the exposed parts is a constant source of reinfection. Permanent lasting recovery, says Dr. Behrend, can only be realized by three agents, as far as is known, viz.: (1) tincture of iodine; (2) chrysarobin; pyrogallic acid. Tincture of iodine is objectionaole on account of its liability to cause permanent pigmentation.

Pyrogallic acid is less effective than chrysarobin, and the author therefore gives preference to the latter. (*Ned. Wick.*, Vol, ii, No. 44.)

All of this is very well, but to my mind chrysarobin and its stain, and likelihood to systemic intoxication is as objectionable as either the tincture of iodine or the pyrogallic acid. The author has completely ignored the factor clinically and fully demonstrated by Neilssen, of Copenhagen, last year. Nielssen demonstrated that the reinfection of pityriasis versicolor, apparently at regular intervals and seasons was strikingly coincident with the time at which the underclothing was changed, viz.: in the spring and fall. He elucidated from a number of cases that before the appearance of the eruption the patient had either worn newly bought underclothes, not having been previously washed, or else the underclothes worn had lain in a clothes press for a season. The fungus of micosporon furfur was found by him on such underclothing, dampness and absence of light favoring the development of the micro-organism. Simple parasiticides will destroy patches of pityriasis versicolor, and that in a short time. After reading Nielssen's article I began observations upon this class of cases and had the satisfaction of confirming his clincial evidence regarding the underclothes theory.—*Dyer in Texas Med. Jour.*

DISEASES OF THE NOSE.

Teach the Children to Clean Their Nose.

One not in the daily treatment of diseases of the nose would be surprised to know how many children are daily met in a large practice who cannot clean their nose; who have never been taught how to blow their nose. The neglect of such neglected teaching is bad, always filthy and frequently dangerous. I have seen children eight and ten years old who could not blow their nose and who had ever present in their nasal cavities large accumulations of nasty mucous. Such children are, of course, of the lowest class and cannot be expected to know the laws of health or how to observe it. In this matter the teachers in our public schools should take such cases in hand. Pent up secretions in the nose do much injury to the child.—*Briggs in Texas Health Jour.*

Profuse Hemorrhage from Removal of Nasal Polypus.

The surgeon who operates daily soon comes to look upon "alarming hemorrhage" as found in the books only. I seldom think of hemorrhage at all and more especially from so small an operation as removal of nasal polypi. On the removal of a very large nasal polypus recently I was, however, convinced that the most alarming hemorrhage may follow. The girl was thirteen years of age and apparently healthy. The polypus weighed over an ounce and while protruding from the nose also hung down in the pharynx. It was seared and cut away rapidly in hard chunks until the pedicle was reached and when it was cut there was an arterial spurl which was most profuse and hard to check. The pedicle had its attachment in the ethmoid bone. Finally a clot was formed and the child made a rapid recovery. In all such cases always be prepared for posterior plugging.—*Texas Health Jour.*

Fissure of Nipples.

Aristol..... 5 iss.
Liquid vaseline..... ℥ i.
S.—Apply after each nursing.

—*Archives of Gynecology.*

NEWS AND MISCELLANY.

The Baltimore Meetings of the American Academy of Medicine.

PRELIMINARY PROGRAM.

The twentieth Annual Meeting of the American Academy of Medicine will be held in one of the buildings of the Johns Hopkins University, Baltimore, on Saturday, May 4th, and on Monday, May 6th, 1895. The "Headquarters" of the Fellows of the Academy and the meetings of the Council will be at the "Stafford."

The meeting will open at ten o'clock on Saturday morning with an executive session of the Fellows of the Academy exclusively; the reading of the papers will begin at about eleven. The morning session will close at one o'clock, and the session of Saturday afternoon will extend from three to six. The "Reunion Session" will be held on Saturday evening. By a standing rule the price of the tickets for the supper is fixed at two dollars. Attendance at the reunion session is not con-

fined to the fellows exclusively, hence any member may bring friends with him by arranging for their tickets with the committee. For the past two years ladies have been present at this session and have added to the enjoyment. The session of Monday will begin with a short executive meeting, after which the reading of papers will be resumed; after a recess at one, the afternoon session will begin at three and continue until adjournment.

Members of the profession, and others who may be interested in the topics treated by the papers, are cordially invited to attend the open sessions of the Academy.

The following are the titles of the papers that have been promised:

1. The address of the retiring president, J. McFadden Gaston, Atlanta, Ga.
2. "Expert Testimony," Henry Leffmann, Philadelphia.
3. "Hospital Management," W. L. Estes, South Bethlehem, Pa.
4. "The Proper Teaching of Physiology in the Public Schools as a Means of Preventing Intemperance and Venereal Disease," De Lancey Rochester, Buffalo, N. Y.
5. "The Problem of Dependency as Influenced by the Chinese in America," W. F. Southard, San Francisco.
6. "What Agencies Conspire to Check Development in the Minds of Children," J. Madison Taylor, Philadelphia.
7. "How to Avoid the Dispensary Abuse?" Emma B. Culbertson, Boston.
8. "Contract Medical Work and Fees," Charles P. Knapp, Wyoming, Pa.
9. "What shall we do with our Alcoholic Inebriate?" J. W. Grosvenor, Buffalo, N. Y.
10. "Life Insurance in its Relation to one of the Dependent Classes," E. O. Bardwell, Emporium, Pa.
11. "Some Results of Competive Medical Charity," George M. Gould, Philadelphia, Pa.
12. "Criminal Anthropology," E. V. Stoddard, Rochester, N. Y.
13. Title to be announced, Leartus Connor, Detroit, Mich.
14. "The Increase in Insanity," Gershon H. Hill, Independence, Ia.
15. "A Perfect Consultation," L. Duncan Bulkley, New York.
16. "An Analysis of the Reports of the Examinations by the State Boards of Medical Examiners," Perry H. Millard, St. Paul, Minn.
17. "The Limits of a Physician's Duty to the Dependent Classes," James W. Walk, Philadelphia.
18. "The Economic Aspect of American Charities," Bayard Holmes, Chicago.
19. "Is our Financial Relation to our Patients and Community the best Possible," Woods Hutchinson, Des Moines, Iowa.

Partial promises have been made for several additional papers; it is hoped that these can be definitely mentioned when the completed program is issued.

Members preparing papers are urged to send a copy of the paper, or an abstract, to the Secretary as soon as possible, in order that time may be given him to prepare the press reports. If others than those mentioned contemplate the preparation of papers, information should at once be sent to the Secretary, as the completed program must be issued early in April.

Annual Meeting of the American Medical Association at Baltimore, Md., May 7, 1895.

The Section on Neurology and Medical Jurisprudence have arranged the following symposiums for the May meeting at Baltimore:

Epilepsy: Medically, surgically and therapeutically.

Hypnotism and mental therapeutics, and its medico legal relations.

Electricity: Some new therapeutical relations and questions of treatment.

Short practical papers on these topics are urgently solicited. Other papers on subjects belonging to this Section will be welcomed. Address

T. D. CROTHERS, M.D., *Secretary*,
Hartford, Conn.

The Obstetrical Society of Cincinnati at its annual meeting elected the following officers for the ensuing year:

President, Dr. A. W. Johnstone; Vice President, Dr. Sigmar Stark; Secretary, E. S. McKee; Corresponding Secretary, Dr. W. D. Porter; Treasurer, Dr. Geo. E. Jones.

ARMY AND NAVY.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE FIFTEEN DAYS ENDING FEBRUARY 15, 1895.

George Purviance, surgeon; detailed as chairman board for examination of assistant surgeons for promotion, to convene in Washington, D. C., March 11, 1895, February 8, 1895.

J. B. Hamilton, surgeon; granted leave of absence six days, February, 1895.

H. W. Austin, surgeon; detailed as member board for examination of assistant surgeons for promotion, February 8, 1895.

Fairfax Iruvin, surgeon; detailed as recorder board for examination of assistant surgeons for promotion, February 8, 1895.

W. G. Stimpson, past assistant surgeon; to assume temporary command of service at Port Townsend, Washington, during absence of Past Assistant Surgeon J. O. Cobb, February 13, 1895.

J. M. Eager, assistant surgeon; ordered to examination for promotion, February 9, 1895.

Rupert Blue, assistant surgeon; granted leave of absence for six days, February 18, 1895.

Seaton Norman, assistant surgeon; ordered to examination for promotion, February 9, 1895.

MEETINGS OF STATE MEDICAL SOCIETIES FOR 1895.

Society.	Name and Address of Secretary.	Time and Place of Meeting.
Alabama	J. R. Jordan, Montgomery	April 16, Mobile
Arizona Territory	L. D. Dameson, Phœnix	February 5, Phœnix
Arkansas	L. P. Gibson, Little Rock	May 1, Little Rock
California	W. W. Kerr, San Francisco	April 16, San Francisco
Colorado	E. R. Axtell, Denver	June 18, Denver
Connecticut	N. E. Wordin, Bridgeport	May 22, Hartford
Delaware	W. C. Pierce, Wilmington	June 14, Wilmington
Florida	J. D. Fernandez, Jacksonville	April 16, Gainesville
Georgia	D. H. Howell, Atlanta	April 17, Savannah
Idaho	C. L. Sweet, Boise City	September 9, Boise City
Illinois	J. B. Hamilton, Chicago	May 14, Springfield
Indiana	F. C. Woodburn, Indianapolis	May 30, Indianapolis
Iowa	J. W. Cokenower, Des Moines	April 17, Creston
Kansas	G. C. Purdue, Wichita	May —, Topeka
Kentucky	Steele Bailey, Stanford	June 5, Harrodsburg
Louisiana	P. B. McCutchon, New Orleans	May —, New Orleans
Maine	C. D. Smith, Portland	June 5, Portland
Maryland	J. T. Smith, Baltimore	April 26, Baltimore
Massachusetts	F. W. Goss, Boston	June 11, Boston
Michigan	C. W. Hitchcock, Detroit	June —, Bay City
Minnesota	C. B. Witherle, St. Paul	June 29, Duluth
Mississippi	H. H. Haralson, Forest	April 12, Jackson
Missouri	F. R. Fry, St. Louis	May 21, Hannibal
Montana	W. M. Bullard, Helena	April 16, Anaconda
Nebraska		
Nevada	W. A. Phillips, Reno	January 14, Reno
New Hampshire	G. P. Conn, Concord	May 30, Concord
New Jersey	Wm. Pierson, Orange	June 25, Cape May
New Mexico	F. H. Atkins, East Las Vegas	July 12, East Las Vegas
New York	E. D. Ferguson, Troy	October 16, New York
North Carolina	R. D. Jewett, Wilmington	May 14, Goldsboro
North Dakota	G. A. Carpenter, Fargo	May 25, Fargo
Ohio	T. Hubbard, Toledo	May 15, Columbus
Oklahoma Territory	C. D Arnold, El Reno	
Oregon	F. Canthorn, Portland	May 31, Portland
Pennsylvania	Wm. B. Atkinson, Philadelphia	May 21, Chambersburg
Rhode Island	W. R. White, Providence	June 6, Providence
South Carolina	W. Pyre Porcher, Charleston	April 14, Columbia
South Dakota	W. J. Mayturn, Alexandria	April —, Alexandria
Tennessee	S. S. Crockett, Nashville	April 9, Nashville
Texas	H. A. West, Galveston	April 23, Dallas
Vermont	D. C. Hawley, Burlington	October 10, Burlington
Virginia	L. B. Edwards, Richmond	
Washington	J. R. Thompson, Seattle	May —, Seattle
West Virginia	G. A. Aschinan, Wheeling	July —, Elkins
Wisconsin	C. S. Sheldon, Madison	May 3, Milwaukee

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ORIGINAL ARTICLES.

CONSUMPTION; ITS PREVENTION AND TREATMENT.*

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The old and trite saying that a nation's strength is a nation's wealth, is self-evident; that both are largely dependent upon its health, is a fact which is readily recognized by all who have given the subject proper thought. The preservation of health should, therefore, be the first duty of the physician to mankind. His second, that of restoring health when impaired. That old, common and ruthless destroyer of human life, consumption, may well engage our earnest attention. We will probably not be able to demonstrate any new theories, but propose only to speak of some of the more common, simple and avoidable conditions which ultimately lead to the development of tuberculosis.

More than a century ago, consumption was treated by some nations as a contagious disease. Tuberculous subjects were isolated with a view of preventing the spread of the disease by contagion or infection. Physicians were required to report all cases of the disease, and those afflicted were registered by the proper authorities as consumptives. All clothing, furniture, etc., used by them was either thoroughly renovated or destroyed. After death, the rooms occupied by them were rigidly disinfected. These regulations were enforced for a period of more than fifty years, with the result only of showing the futility of such measures. They will continue to be fruitless unless they are founded on a correct understanding of the way in which the contagious material is transmitted from one individual to another, the conditions most favorable for its reception and the liability to produce its characteristic results after finding lodgment in the system.

While the contagious nature of consumption was admitted at an early day, positive proof of its communicability was not furnished the profession until the researches of the immortal Koch were published in 1882, since which time, other bacteriological investigators have sustained his views by their investigations in this branch of medical science. The result and final conclusion of these experiments and investigations is that the exciting cause of tuberculosis is the tubercle bacillus. A logical sequence of this conclusion would naturally be that the disease is communicable and, consequently, preventable.

In the face of all the facts connected with the contagious character of the disease, the impression still exists to some extent that it is a matter merely of opinion; that equally competent and reliable authority is arrayed on either side

*Read before the Northern Tri-State Medical Association, December 11, 1894.

of the question. With the laity and that part of the profession not given to investigation and who are skeptical as to the correctness of the conclusions of many of our more brilliant bacteriologists, the question will perhaps remain unsettled. While our facilities for the study of this branch of medical science are quite limited, we are disposed to give due credit to the teachings of those who are in position to be authorities upon this subject.

A knowledge of the more common causes of consumption is necessary for an intelligent and profitable study of its prevention and treatment. The facts connected with its causation and manner of transmission, I think are fully established, and are based upon careful experimental observations. There is little room for doubt or for difference of opinion regarding the main factors in its causation. Really none among those conversant with the scientific conclusions reached by the improved methods of the modern bacteriological student. To dwell on this particular line may seem superfluous, but we wish to be plainly understood as being a disciple of the teaching that there are only two principal conditions necessary for the development of the disease. This being true, all our efforts in the direction of prevention or treatment, should be to so change or modify these conditions that the ultimate result may be reduced to the minimum.

The two factors necessary to the development of tuberculosis, are the tubercle bacillus and the predisposition or condition of system favorable for the development of the disease after the reception of the germ. In all infectious diseases, there are two forces at work: *First*, the number and virulence of the germs that may gain admission to the body at any given time. *Second*, the resisting power of the system or its ability to successfully combat the poisonous influence of the infectious material and thereby render negative its results as regards the development of disease. The resisting power depends upon several factors, prominent among them being the avenue by which the germs enter the body, the vital condition of the tissues with which they come in contact, and the general nutrition of body at the time of exposure.

A large per cent. of people who are exposed to contagious diseases, are not attacked by them. Especially is this true of consumption. The explanation lies in the fact that the natural power of resistance to the tuberculous germs is so great at time of exposure that the disease is not contracted. The facility and certainty with which it is transmitted is minimum compared with many other diseases. Usually, protracted exposure to the infection, or intimate relation with those afflicted with the disease, is requisite; or, perhaps, the resisting power is such that it is easily overcome. Any influence of a depressing nature renders the system more susceptible, and hence the transmission of the disease more certain.

Of the two principal avenues by which the germs enter the body, the respiratory passages is far the more common; hence, anything that weakens the vitality of these parts renders individuals much more susceptible to the infecting influence of the germs. Unhealthy occupations, defective ventilation, imperfect nutrition, whether from improper food or from insufficient quantity, heredity, bronchial or pulmonary inflammations, and many other things might be mentioned as important factors in creating a soil favorable for the growth and development of the bacilli after reception into the system. These factors act as predisposing causes by rendering the resisting power less efficient in the fight for the ascendency between the cells and the germs. Yet, they only provide the predisposition; the fact, as taught by bacteriology, remains that no one, nor all of them combined, can produce the disease independent of the tubercle bacillus, which is the chief or exciting cause and without which tuberculosis is never developed.

The respiratory tract being the chief avenue through which the infectious material is received, and the germs being so universally present in the air, the inquiry will naturally arise, Why is it that so few become diseased, as compared with the great number who are exposed to the invasion of the bacillus by inhalation of atmospheric dust? Evidently the reason for this is the fact that a great majority of the people exposed, have an amount of resisting power sufficient to avoid infection by the tuberculous germ. The anatomical arrangement of the respiratory organs and the peculiar characters of the mucous membrane lining the bronchial

tubes, are such that all dust is lodged upon its surface and much of it is subsequently thrown off in expectoration. Tubercle bacilli are taken up in the same way and, often times, disposed of in a similar manner; or they may be retained until their vitality is destroyed and they become incapable of infecting the tissues in their characteristic way. In these cases there is a conflict between cell and bacillus. If, now, the mucous surfaces are healthy, the lungs in good working order, the cells entering into their formation vigorous and the general environment of the body not weakened, good health will be maintained. If the contrary, tuberculosis is more than likely to be developed. Inability to resist the special work of the tubercle constitutes a predisposition to the disease, and is much stronger in some persons than in others; but it is probably developed by a train of circumstances, similar in most cases.

In considering preventive measures, it is essential to look after some of the causes that lead up to the establishment of this predisposing condition. We make only general suggestions to the effect that it may be inherited, or acquired, or both. Children of consumptive parents do not inherit consumption, and many of them never have it; but they are more liable to be weak and unable to resist the influence of the disease-producing germ. This is not only true of the progeny of consumptives but those born of parents suffering from any malignant disease are quite liable to be deficient in physical ability.

Among the many causes leading to the acquirement of the predisposition, only a few need be mentioned: breathing impure air; the use of unwholesome food; the existence of other lung and bronchial diseases; want of proper exercise; abuse of the use of alcoholic liquors; disease of the kidneys—in fact, anything which leads to a deterioration of the general health, or a weakening of the tissues upon which the bacilli find lodgment. These various factors seldom act singly in the causation of consumption, but in the study of individual cases, we see the influence of many trifling circumstances, the combined force of which seems to act in one line, producing the disease.

In discussing measures to be taken for the prevention of consumption, a thorough conception of its communicability, curability and prevention should be had; and these propositions should be taught the laity, as well as the profession. The people should understand that, from a sanitary and economic standpoint, all other diseases sink into comparative insignificance.

It is usually so insidious and slow in its progress that its gravity is not realized; its ravages are so common that we become accustomed to them and are indifferent about adopting common, simple and easily applied measures for its prevention. Perhaps this indifference is due to the fact that much time often elapses after exposure to the exciting cause, before the disease is manifest; or it may not be developed at all. Again, we quite often hear the remark that the early symptoms are only "a cold," a bronchitis, etc., until such inroads are made that the adoption of any measures looking to prevention or treatment, avails but little. Consequently the laity regard consumption as meaning death, notwithstanding all the wisdom of modern medical science. The proposition is nevertheless true, that the disease is curable, and curable in quite a large proportion of cases if its nature is well understood; if it be recognized early and appropriate measures are employed to prevent its extension.

We urge the importance of more thorough education along this line; and expecially upon the two main points, namely, to correct the predisposition and prevent the reception of the tubercle bacillus into the system. These two things accomplished, its mortality record will be much reduced. While we may in this brief article, make only some general suggestions in this direction, we firmly believe that with our present knowledge and the methods at our command for studying the causation, dissemination, etc., of the disease, the time is not far distant when we will be able to formulate and adopt measures which will almost certainly prevent its occurrence. Of all the contagious diseases consumption is certainly one of the easiest to prevent, as it is one of the most unsatisfactory to treat after it is well established.

The first step looking to the study of preventive medicine, especially regarding tuberculosis, is to educate the people and

make them realize that a chief object of medical science is to prevent disease, as well as to treat it; also, that their coöpertion with the profession is essential if they would realize all that is possible in this direction. It should be the duty of sanitary authorities, both State and municipal, to employ comprehensive and efficient means for the prevention of tuberculosis. Need I say that these measures should be thoroughly studied and taught in a general way, by every practitioner of medicine? We should instruct the people relative to the communicable nature of the disease; instruct them as to the plans to be adopted to render the sputum innocuous; teach them how to prevent its being taken into the air as dust particles; inform them of the best method of caring for wearing apparel, disinfection of all clothing, etc.; in rooms occupied by the victims, the cleaning of walls, floors, furniture, etc. In short we should educate them as to a thorough renovation of everything that has been used in caring for a consumptive. We should recommend the establishment by law, of such measures as shall prohibit the employment of tubercular persons in factories, school-rooms and such other situations as will expose the health and endanger the lives of other people. We should urge the importance of sanitary regulations along the line of prevention of tuberculous dissemination in public gatherings, especially in halls, churches, school-houses, etc. We should teach that success in treatment depends materially upon an early diagnosis; consequently that a microscopical examination of the sputum in suspected cases will make our treatment more efficient.

In view of the transmission of disease by and through food products, certain regulations should be adopted by the government whereby dairy cattle should be inspected, together with those to be slaughtered for food. Slaughter houses, with their environments, should be under governmental supervision, as regards purity of meats; and all meat not thus inspected should be barred from sale, both public and private.

The establishment of hospitals by the public for the treatment of the consumptive poor, should be recommended in all localities where expedient.

The influence of our knowledge should not only extend to the community in which we live but to corporations which have under control the means of public travel, whose business it is to furnish conveyance from point to point through our country. We disapprove of the promiscuous occupancy of conveyances by well and sick alike, regardless of the nature of the ailments of the latter. We refer particularly to the sleeping apartments of steamships and railroad cars.

Regarding the merits of the measures suggested, opinions will justly differ both as regards the plans and the feasibility of their adoption. At this particular epoch in sanitary science, it is our opinion that some decisive steps should be taken in this direction. While we might not be able to establish any arbitrary rules, there would be germinating points, from the growth of which great good would ultimately come. In this way, our country would be made stronger; and as well suffering thousands relieved from disease and premature death.

We come now to the treatment proper, of which we shall speak in a general way only, making suggestions relative to the employment of drugs, diet, hygienic and climatic treatment, which we think may prove beneficial in a majority of cases as they present themselves for treatment. The management of each case should be a separate study, proper attention to which will suggest appropriate remedies. Reviewing the treatment, we find changes as radical, the benefits derived therefrom as great as are the improved methods of diagnosis. Depletion, stimulation and starvation in various ways entered into the history of the treatment of disease in the past, and tuberculous disease has been no exception to the rule. We find these methods have been strenuously followed, and we believe many times with disastrous results to those receiving it. This unscientific way of treatment has, perhaps, been largely responsible for the great mortality attending it, and for the lack of confidence regarding its curability which has prevailed among the laity. When the profession began to make a more searching inquiry into the etiology, treatment became more rational, with a gradual decrease in the percentage of mortality. The number of remedies employed has decreased, while the efficiency of those used is much more satisfactory.

In the general plan of treatment which

we would suggest, the environments or surroundings should first engage our attention. For the purpose of brevity, we will include under this head, the location and arrangement of apartments (if patients are confined indoors), the clothing, food, exercise—everything save drugs. Make the surroundings of every invalid such as to prevent all worry, anxiety, etc., so far as possible. If they must go down the declivity, help them go slowly. In short, our patients should have an abundant supply of pure, fresh air and sunlight; warm, clean clothing on a clean body; plenty of well prepared nutritious food, pure, rich milk, being superior to all others. Add to these such home influences as will make life worth living.

In the development of drugs, use only those whose therapeutic action would make them valuable in maintaining the normal physiological condition of the system in every particular. In this way, if any, we maintain a vigorous healthy action of every cell that is liable to attack by the tuberculous germ. If possible, maintain perfect digestion and assimilation, which secures good nutrition, for good nutrition to this class of persons means the perpetuation of good health and life—the opposite, disease and death. In our opinion, but few drugs are required to accomplish all that can be done in the way of medical treatment. Chief among these are iron in its various forms, quinine, strychnia, arsenic, creosote, iodide of potassium, the hypophosphites, cod liver oil, morphia, and a few others to meet special indications.

A judicious use of these remedies in appropriate cases, under the guidance of thorough and careful practitioners, we believe will cure many cases, prolong the life of others with comparative good health, and make the pathway to the grave of the incurable smooth, easy and without friction, so that their years of invalidism may be spent with as much comfort as is attainable by treatment.

THE EARLY DIAGNOSIS OF TYPHOID FEVER.*

PROFESSOR V. HANOT, PARIS.

Typhoid fever is one of those acute, infectious diseases which is most prone to an atypical course, which lasts longest, and for which responsibility weighs heavily on the physician on account of its attacking usually young persons, with their deep interests in life.

During all this morbid evolution, which is often so tortuous and deceiving, one will be under constant surveillance and be strictly judged. Therefore, have a care not to utter a word that may conflict with your ultimate diagnosis and never appear surprised; for the interest of the patient requires the physician to posses the full confidence of his friends.

It is true that the diagnosis is ordinarily easy and the treatment fixed by rule; but the disease may burst upon one at any time, and find him unprepared. On the contrary, if early appreciated the disease may often be kept within bounds and be led on to a favorable issue. Therefore study carefully each case of typhoid fever which you may meet and even if fortune forsake, you will be assured that you are worthy of the mission confided you.

How does typhoid fever begin? Here is the first stumbling block and not the least embarrassing of a medical career. The problem is often very difficult to solve. First of all, I would have you keep in mind that it is rare that typhoid fever begins suddenly with chills and fever, and that it is not a disease with a violent beginning as pneumonia, erysipelas or scarlatina, but that usually it developes in an obscure manner, and only little by little, after an undecisive course, does it assume a definite form.

When the pathogenic microbe has penetrated into the intestine it is not in the midst of an ideal culture medium as in the laboratory, but the field is already occupied by other germs which, to employ

* Translated from La Semaine Medicale, No. 63, 1894 by F. H. Pritchard, M.D.

Metchnikoff's expression, act either favorably or unfavorably upon its development. Decreased or increased in morbid power by this first conflict it invades the organism which reacts and resists in a different manner according to the age, social standing, constitutional predispositions, former hereditary weaknessess, etc. From these proceed the differing variations of typhoid fever. Generally typhoid infection of the organism, whatever may have been the initial condition, reveals itself at a given moment by a thermic evolution, with a definite cycle, in three stages which are quite distinct: first, a stage of ascending oscillations; second, a stage of stationary oscillations; and third, a stage of descending oscillations. This is called Wunderlich's temperature curve. But this tracing is not exactly parallel for, before the invasion of the organism, the disease undergoes a preparatory elaboration which is performed in absolute silence or with badly characterized signs. Therefore, it is convenient to admit in this period of incubation—in this propyretic stage as Gueneau de Mussy calls it—a first phase which is absolutely latent, and a prodromic period, properly called, which is marked by the first appearance of malaise and even by a slight and irregular febrile movement. I shall tell you later that it is exceptional that one is able to obtain a complete tracing according to Wunderlich and especially if one attempt to discover the first elevation from a complete state of apyrexia. These are the signs which should be first tracked out and of which the exact interpretation should be made. This prodromic period represents, on a small scale, a typhoid fever which is germinating and extending. You have been able to form an opinion from the eleven cases of typhoid which we observed during the last six months. Let us take as a type the young clerk who lies in the sixth bed of the Magendie ward.

Aged twenty years, he has only been living in Paris for eighteen months, and has always been in good health. At his entrance into the hospital he had been sick for about a week, he having been seized towards evening one day with a feeling of weakness and with pains in the muscles upon the least effort. The next morning he felt somewhat better, but soon his usual work became too much for him; his sight became dim, his mind confused and for a short time he fell into a half stupor, after which he returned to his work. It was not long before he commenced to complain of his head, roaring in the ears, dizziness and chilliness. He staggered in walking and he was forced to leave his work before the usual hour. He went to bed feeling sore, depressed, restless and slept but little or none at all. He was entirely without appetite, with a bad taste in his mouth and a pasty coating on his tongue. He had had at the beginning alternating constipation and slight diarrhœa, with some colic. The patient thus tried for six days to keep at his work, but on the seventh, finding it impossible he entered our service. We found his mind clear, and about in the condition of the preceeding days, which he described to us with precision. The rectal temperature, on the evening of his admission, was 37.6° C., the next morning 37.2° C., that evening 37.2°, the morning following that day 37.4° and that evening 37.8°. From this moment it increased progessively, to attain four days after 39.4° in the morning and 39.9° in the evening, at which figure it remained, with variations of some tenths of a degree for twelve days, when it began to descend and finally entered into the apyretic period, during all of which time the characteristic symptoms of the disease developed.

The prodromic stage had lasted eight days and had presented the appearance of a shortened attack. You will remark that he has had no epistaxis. Epistaxis is an expressive and habitual sign of the beginning, but it is neither constant nor pathognomic. It is also observed at the beginning of other infectious acute diseases and again it may frequently be lacking. Thus, out of the twelve last typhoid cases we have observed it but five times. The statements of the patients should be received with caution, for we cannot always confirm them by those of the family. Therefore, ordinarily, the prodromic period is not characterized by anything localized nor conclusive; hence, here is the first difficulty.

You are called, for example, to a young man or a young lady whose health has been insensibly disturbed as in the case I have just related you. The parents are anxious; the parents are always ready to think their children attacked by typhoid fever, for they know that at their age they

are particularly liable to be attacked by this disease which has still a feared name. Therefore, they are all anxious and press you. They call you aside and put you through the same list of questions. What is it? Is it not the typhoid fever? Now, it is most frequently at this period impossible to give a decided answer. At all events, do not pronounce the word typhoid fever until absolutely certain of the diagnosis. Do not become frightened too soon and especially without cause. The friends will not pardon you for such a cruel error.

Therefore, examine your patient very carefully and attentively; be prudent and reserved. The case is possibly that of a candidate for an examination for a concours; possibly, that of a workman who has been overworked or undergone privation, or that of a high liver who has given himself up to excesses. Think also of a gonorrhœa which might have been concealed. The patient is perhaps of a consumptive parentage and you are in the presence of one of those cases of tuberculosis with an insidnous beginning which bear the impress of typhoid fever. The case may be again that of a young girl who has been affected by a violent emotion. Is it hysteric fever? The patient is in the midst of an epidemic of grippe or typhus fever. Is it either of these? Remember that sometimes in tuberculosis the initial manifestations of syphilis are preceeded by a germinitive phase which is analogous to that of typhoid fever. You will call to mind each of the morbid states mentioned and remember how their respective beginnings differ from that of typhoid fever. Hold in mind, besides the time which the patient has been living in Paris or any other large city, the season, the coexistence or not of an epidemic of typhoid fever. Find out if he had the disease before, for recurrences are very rare, though possible.

In spite of all this it will be frequently more than once difficult for you to fix your diagnosis. Ordinarily, it must be admitted, the hesitation will not last long; the characteristic symptoms are not long in appearing, but often also the prologue will be very long and your indecision and embarrassment will increase. Therefore, you must know the possible duration of the prodromic period for it may be very variable. During the two years which I was interne at the Hospital Cochin under Bucquoy, which then had only one medical service, there appeared one day a young man who did not desire to enter the hospital, but only asked for relief. He complained of being without appetite and feeling weary. Nothing else was to be discovered and he was given a purgative and advised to rest. Several days after he reappeared feeling no better. His appetite and strength were still the same. No appreciable signs of fever could be discovered nor other typhoid signs. He again refused to enter the hospital. Several days later he again returned, but this time dragging himself along with difficulty, and accompanied by a comrade who had brought him in a carriage. His face, the state of his tongue and the fever could leave us no longer in doubt; it was typhoid fever.

As he had first been seen ten or fifteen days before, for the first time, one would think that he was least at the end of the first week of his disease, having had at the beginning a typhus levissimus or ambulatorius. Yet at the first examination in the ward we were able to find neither sibilant râles in his chest, nor the rose-colored "rash" upon his abdomen. His temperature did not go above 38°, and it continued to rise for two or three days, when the râles were observed and soon after the characteristic "rash."

The patient was therefore only at the second, third or fourth day of his disease and the preceding days of malaise represented the germinative or prodromic stage which is usually only four to six days. Now out of twenty cases where I have been able to note the prodromic period precisely, which was generally from four to six days, I have found seven where it lasted from fifteen to twenty days and further observation was able to prove that the ultimate course was not due to relapses but was marked by the grand characteristic lines and episodes of a typhoid attack. During these two years, where the conditions for observation were especially favorable, I have not been able to obtain a complete and tracing of Wunderlich's ideal temperature curve. Either the patients escaped observation during this period or they did not enter until the disease was well developed. Whatever it be that which I have stated is in accord with the statements of a large number of

writers. The prodromic period or that portion of the period of incubation which consists of the first malaise to the setting in of definite febrile symptoms lasts, according to Murchison, from one to several days; Griesinger puts it at two to five days as an average and sometimes even seven or to fifteen days and over; Guéneau de Mussy would fix it at two weeks, on an average, and sometimes even three weeks.

These variations should not astonish you for as I said before the pathogeny of infectious diseases is subordinate to a multitude of conditions. The organism may be more or less predisposed by former excesses or constitutional defects or the germ may be particularly virulent or associated with other pathogenic microbes. The microörganism does not present the whole morbidific power for the individual also plays his part. You perhaps are familiar with the fact reported some time ago by Quincke, of fourteen persons who had, at the same time, drunk of water contaminated by the dejections of typhoid patients and who were all seized with the disease in eight to ten days after, yet the mode of beginning differed notably.

Thus, in two or even three weeks, it may be impossible for you to make a visable diagnosis and do not forget how long it is occasionally necessary to wait. During this obscure period you should constantly keep in mind certain facts which will lead you through the difficulties.

In the first place, among the typhoid states without precise localizations which may be confounded with an incipient typhoid fever, you will be able to eliminate also completely, *a priori*, those which set in suddenly as gastric fever, the grippe, typhus, certain forms of malaria, herpetic and hysteric fever.

In gastric fever vomiting is much more frequent and albuminuria less constant than in typhoid. In the grippe the temperature in the evening of the second or third day reaches 40° and even more; the profuse sweats occupy an important place while they are exceptional, in typhoid fever (except in the sudoral form of Professor Jaccoud). In the grippe, the urine more frequently contains an abundance of urobiline. Yet this disease and typhoid fever may coexist in the same person and develop parallelly. Professor Potain has called attention to this combination of which I have shown you every autumn several examples. With us the epidemics of grippe rage ordinarily in the fall months at about the time when the typhoid epidemics are inclined to diminish, so that our hospital often contains several cases of typhoid and the grippe at the same time. At a given moment it is possible to distinguish in patients the existence of signs common to the two diseases, but in the commencement, the distinction is by far not marked. Not to withdraw too far from the special point under consideration I shall simply state that usually it is the grippe which begins and even may persist after subsidence of the typhoid fever.

Typhus is to be differentiated not only by the appearance as an epidemic and the greater suddenness of its beginning, but also by the deep stupor which it characteristically produces. You know that for several years it seems to have acclimated itself here so that it is well to think of it.

There are also continued forms of intermalarial fevers as well as there are typhoids which affect an intermittent type; here the therapeutic test with quinine and the presence of Laveran's hematozoa in the blood will decide. The same holds good in those cases where the two diseases are associated, typho-malarial fever.

Herpetic fever when the eruption is confined to certain regions of the body, especially the genitals, may also simulate typhoid. Therefore, once more let me tell you always to examine your patients as our fathers said *e capite ad calcem*.

In hysteric fever the urine may remain abundant and clear (Hanot et Boix) and present the inversion of the phosphates as pointed out by Cathelineau and Gilles de la Tourette.

Do not forget that acute osteomyelitis usually sets in suddenly with a profound typhoid state without any definite local symptoms; cerebro-spinal meningitis nearly always bursts forth, all at once, with chills and a fever, with an initial temperature of 39-40° from the first day.

Let us now pass on to a second group of typhoid states which set in more insidiously and slowly.

Firstly, there is acute granular tuberculosis where, from the beginning, one observes fine and fleeting râles in the lungs, while in typhoid fever the pulmorary signs only are seen after the thermic curve is definitely established and then as sibilant

râles. If the râles have not already appeared the fever is active, in acute miliary tuberculosis, and often presenting the inverse type as described by Brunicke as characteristic of acute tuberculosis and in typho-bacillosis there is a disassociation between the pulse and temperature as pointed out by Landouzy. Often from the very beginning the pulse in typhoid is slower, while in acute tuberculosis it is accelerated.

Only very exceptionally is acute phthisis to be diagnosed by the discovery of tubercular granulations in the choroid, by the ophthalmoscope. Remember again, that acute miliary tuberculosis is much rarer than typhoid. Nevertheless, in a general way, it may be stated that the germinative period of all the great acute infections as tuberculosis, typhoid fever, syphilis can not be distinguished the one from the other, even phthisis and acute typhoid fever lack special distinguishing signs. At this period bacteriological examination of the blood will not give the result that it will later. Read in this regard the work of Villomin, where the illustrious physician emphasizes the resemblance of acute tuberculosis and beginning typhoid fever; he shows that they appear to be two modalities of the same general infection. Very able diagnosticians have taken a fever which might be called presyphilitic for a typhoid.

When you have passed in review those morbid states which I have enumerated, you might think also of a typhoid state dependent upon trichinosis or farcy.

In 1874, at the Hôpital Cochin, I saw a farrier who had been sent in by a physician in the city, as affected with typhoid fever. The disease had begun suddenly with chills, fever and headache; several days later the characteristic abscesses of farcy appeared.

There are besides acute cryptogenic infections of which the pathogenic microbe has not yet been determined. The clinician will finish by having impressed upon his eye and mind the physiognomy of the general infection, but what is the hidden germ which is destroying the organism? That is the difficulty which only clinical experience can solve, yet it does not always succeed. At other times the typhoid state is subordinate and dependent upon an acute and local lesion which is primary and predominant as in endocarditis, nephritis, typhlitis or meningitis. An attentive examination will enable one to distinguish the cause. You will have observed that during this entire discussion I have not referred a single time to the value of dicrotism of the pulse, enlargement of the spleen, the detection of Eberth's bacillus in the feces, urine or spleen.

Remember that this is only a question of the diagnosis of the disease at the beginning. Now, I cannot tell you whether the dicrotism is to be perceived in the prodromic period, or just before the period of ascending temperature, or how much time before. This will vary according to the case. Besides, dicrotism is observed in other infectious diseases, yet it is especially noticed in typhoid fever. Puncture of the spleen is not a practicable proceedure and the bacilli in the feces are said by Chantemesse to be difficult of recognition before ulceration sets in. Besides the bacteriologists differ on this point. In the feces of typhoid patients, Gaffky, Di Vesica, Pfuhl, Eisenberg, Rodet and Roux, Redtenbacher, etc., never were able to demonstrate by cultures, the presence of Eberth's bacillus; it was found several times by Pfeiffer, Seitz, Merkel and Goldschmidt; Villschour and Karlinski have never been able to isolate it before the second week. Chantemesse says that one will commence to meet with it from the tenth to the twentieth day.

Habitually, in typhoid fever, the spleen is increased in volume but it is not always so. Last week at the necropsy of the woman lying in the thirteenth bed of the Grisolle ward, who died on the twentieth day of typhoid fever, during which course we discovered a suppurating thyroiditis containing Eberth's bacillus, we did not find the spleen much enlarged; it weighed 205 grammes, measured ten centimetres in length and six in breadth.

On the other hand, an enlarged spleen is met with in typhus, also acute tuberculosis, the grippe and during the fever preceeding syphilis, as my regretted friend Quinquad demonstrated.

In several cases in the prodromic period of typhoid I have observed most frequently I was unable to determine if the organ was enlarged. It must be admitted that an increase in volume of the spleen is not always to be made out; though the German writers often speak of the spleen as

easily to be felt, percussion will furnish you with the most precise indications. Professor Peter laid great stress upon the pain provoked by percussion of the splenic region; that is a sign of infection but is not distinctive. Never forget when you have made out an increase in volume of the spleen, of asking whether the patient has ever lived in a malarial district or has had the malaria, for sometimes this is the only sign of palustral infection.

Since Dr. Vallin's monograph appeared, several cases of afebrile typhoid have been reported where the prodromic stage, the invasion and stage of full developement are thrown into one uniform course, without characteristics and not without peril. At the beginning it presents nothing particular, but it must be kept in mind that one does not confuse a feverless typhoid in full blast with a characteristic case having a prolonged prodromic stage. One might easily announce the near convalescence of the case when it is hardly established in its course, or, possibly while it is on the eve of a mortal complication. Beware of apyretic typhoid.

I once saw a young chlorotic girl who had been ailing for fifteen days without appreciable fever; she was livid, emaciated, no longer able to be on her feet; she was seized with epistaxis and metrorrhagia. A diagnosis of grave chlorosis from pernicious anemia was made. Death took place one night and the necropsy revealed Peyer's patches in the intestine to be ulcerated, with intestinal perforation and subacute peritonitis.

Another time I was called, with three of my colleagues, to a lady aged about sixty, who had lost a daughter from typhoid fever. After her death she fell into a state of profound depression which was thought due to her sorrow. She was abed, motionless and pale. It was a question whether she was not infected at the same time as her daughter who lived with her. But the rectal temperature never reached 38° C.; besides we could not discover any "rash," and a very thick layer of abdominal fat prevented an examination of the spleen. We therefore hesitated at a diagnosis when a mortal hemorrhage from the intestines put an end to the disease. In typhoid fever without elevation of temperature, all chronological distinguishing features are wiped out and one is obliged to wander about without a guide.

I have shown you the first difficulties which will present themselves to you. Though the prodromic stage may be prolonged it may, on the contrary, last but a few days. The condition of the patient aggravates, the weakness increases, headache remains intolerable and is often accompanied by epistaxis; to be about becomes impossible, diarrhœa appears, the nights are passed without sleep and restlessly with some delirium, the fever rises, the pulse becomes dicrotic, the tongue dry, the belly tympanitic, the spleen swells and albumen appears in the urine. The picture is then characteristic, especially as I repeat, if it be a young man or a young girl who has but a short time before come to Paris and an epidemic is raging. I emphasize these words, *young man, young woman* for, according to the age, the picture will change.

Thus in children, on account of the particular sensitiveness of the nervous system, the disease often begins with delirium and convulsions which might lead one to think of a meningitis, or by abdominal pain and vomiting, which might induce one to diagnose peritonitis. In old persons the commencement is often insidious, most generally without headache, without epistaxis, with abdominal symptoms and almost without fever.

Even in the ordinary cases of the young man and the young woman one may encounter another difficulty. Sometimes the disease will begin with a maximum of concentration of the morbid agent or by a localization in some other region than the intestine, a sort of heterotopia.

In several cases reported by Drs. Jaccoud, Duguet, Lecorché, the affection began by a tonsillitis and it was only later with the appearance of characteristic symptoms that it was recognized that a masked typhoid fever was developing. I had seen just such a confusing case during the last year of my time as interne, and the circumstances remain graven into my mind.

One of my friends was seized with an intense tonsillitis; nevertheless he continued at his work in the hospital. For about two weeks we saw him pale and wan, stretched out every afternoon in the easy chair of the watch-room taking with

difficulty a few teaspoonfuls of porridge. He only complained of his throat, which seemed to explain everything. Finally, unable to bear up longer, he left Paris to go to his parents. The same day of his arrival there, after the first meal with his family, he died of intestinal perforation.

At other times it is pneumonia which opens the scene. Professor Potain, in his lectures, has pointed out the mode of its beginning. Gerhardt and Lépine have also published several cases under the name of pneumo-typhoid. I have also recorded a typical observation, in 1884, in the thesis of Dr. Mulette. In a case reported by Dr. Lecorché, a pleurisy seemed to have been the initial phenomenon. Besides, do not forget that cerebral symptoms may burst forth with great violence during the first days under the form of mania. Patients have been sent to asylums for maniacal symptoms which masked a typhoid fever. Soon the disease was manifest enough, while the mental complication went on to decrease or disappear. Take care not to fall into such an error which may be so disastrous in many ways. Quite a while ago I observed two cases of typhoid fever commencing by melancholy and delirium de grandeur. You may find them in Dr. Barbelet's thesis (1874). One of these was a young woman who accused herself of having drowned her two children, groaning without cessation and demanding mercy; the other was a man who thought himself director of the opera and distributed tickets to boxes to those about him. These two patients had been sent to the Sainte-Anne Asylum where the diagnosis was rectified a little latter. Dr. Bucquoy and I, in our monograph on the delirium of typhoid fever, have treated of these pseudo-manias of the beginning of typhoid fever.

Without having exhausted the subject of typhoid fever, I think I have dwelt long enough on the subject to teach you prudence and reserve.

ACUTE BRONCHITIS IN CHILDREN.

W. B. MOORE, M.D., WOODBURN, N. C.

Bronchitis of infants has, it seems to me, enough of interest to be spoken of at some length, but such is not my purpose. I have noticed that this subject has been somewhat neglected in medical journals.

Bronchitis occurs both as a primary and secondary disease. It is primarily caused by sudden change of temperature, from warm to cold, exposure to currents of air and the carrying of children, insufficiently clothed, from heated rooms into the open air, also throwing off the bed clothes during sleep.

The causes of secondary bronchitis are obviously the diseases in connection with which it occurs.

Bronchitis is generally bilateral except when due to tubercles or to pneumonia, then it is often confined to the tubes nearest to the diseased area.

Of the symptoms are flushed face, headache, acceleration of the pulse, fretfulness, with lessening of the appetite, and increased respiration according to the intensity of the disease.

On auscultation are heard coarse râles. At first sibilant and sonorous râles, at which times the secretion of mucous is scanty. The cough, in the commencement is for the same reason dry. It gets looser by the second or third day. Unless the child has reached the age of four or five years, expectoration does not take place; phlegm is usually found in the stools in either case; the color of the stools may also be changed to a greenish hue from an improper diet or germ, with a bad odor attending the stool.

Treatment should be both external and internal.

A poultice should be applied to the chest. The one I have most frequently used is made of wheat bran, about one and a half pints, to which should be added enough boiling water to steam, placing the bran first in a heated vessel. When thoroughly steamed put into a muslin bag. On the side to be placed next the skin, sprinkle spirits of camphor. Use as hot as it can be borne, first testing it

COMMUNICATIONS.

THREE OPERATIONS FOR EXTRACTION OF CATARACT—ONE ARTIFICIAL RIPENING OF SENILE CATARACT.*

JAMES MOORES BALL,† M.D.

I always extract without it, unless a specific reason exists for the making of an iridectomy. This is a more difficult operation but, if all goes well, the patient is left with a nice round pupil, in place of the large coloboma of an iridectomy.

CASE I. The first patient, a colored woman who does not know her age, presents bilateral cataract. Each eye is ready for operation so far as the ripeness of the lenses is concerned. We will operate upon the left eye. The patient's face has been thoroughly cleansed, the conjunctival cul-de-sac washed with a 1:2000 solution of bichloride, and cocaine has been instilled. We insert the Knapp speculum; you will notice the palpebral opening is unusually small, causing the woman to look like a Mongolian. The distance from the inner canthus to the root of the nose is greater than usual, and the eye is small. This state of affairs will make the operation more difficult than usual. Not being ambidextrous it will be necessary for me to stand in front of her in operating upon the left eye.‡ A few instruments are now handed to my assistant and we begin. The eyeball is turned downward by forceps held in my left hand and a small Graefe cataract knife is passed through the apparent corneo-scleral junction and brought out at a point opposite. Now by a gentle sawing motion the cut is made, the knife is laid aside, a cystitome of the angular variety is passed into the eye, turned on its axis, and made to incise the anterior capsule of the lens. Now, stepping behind the patient, I take the cataract spoon in one hand and a spatula in the other and deliver the lens. You will notice that considerable pressure is required—more than in the operation with an iridectomy, since the resistance of the iris must be overcome. The iris, by its own elasticity, withdraws into the eye, but the pupil is not in the center of the cornea. After cleansing the eye of all fragments of cortex we will gently stroke the iris back into place, leaving it with a central pupil. The speculum is now removed, the lid is closed gently and a moist dressing of bichloride applied. The other eye will be bandaged.

CASE II. This man, Mr. H., aged sixty, a German, was operated on some time ago by some one who removed a cataract from his right eye; the result was not satisfactory and he wants me to remove the opaque lens on the left side. He cannot count figures but readily tells the location of the windows. Having him well prepared for the operation I will now remove the cataract. This is a much easier case upon which to operate. The eye is of good size, the palpebral fissure of normal width, and everything promises a good result. You notice that I pick up another knife, it being my practice never to use a cataract knife the second time without sharpening it. The knife and other instruments are dipped into boiling water for a moment. I pass the knife in the usual manner and the section is made without a hitch, and those who are near to the patient will notice how the cornea collapses after the cut is made. The capsule is now ruptured in the usual manner and the delivery effected without difficulty. The dressing of this eye will be similar to that of Case I.

CASE III. This old negro, like many of his class, does not know his age, but he appears to be about seventy. He has been blind in both eyes for three years. Each lens looks white like milk, and it is in such eyes that we find Morgagnian cataracts—one with a hard nucleus sur-

* Clinical Lecture.

† Professor of Ophthalmology and Otology in the St. Louis College of Physicians and Surgeons; President of the Tri-State Medical Society of Iowa, Illinois and Missouri.

‡ The writer has recently learned to extract cataracts with his left hand.

rounded by liquid. You will observe here a marked arcus senilis. This, however, has no bearing upon the healing of the wound. The usual incision is made, only smaller than in the preceding cases; the capsule is ruptured and now you see the milky substance running out of the capsule. It is a case of Morgagnian cataract. The hard part of the lens is delivered through the natural pupil. In this case the iris remains in contact with the lips of the wound. The pupil has been cleaned of all débris, and the iris has been stroked back into place, but immediately prolapses. Perhaps the use of eserine solution would keep it in place, but I will not take any chances. The iris is cut off, the angles of the iris are freed from the corneal wound and the usual dressing applied.

Case IV. This man has noticed failing vision for two years. Inspection shows bilateral immature cataract. He readily counts fingers at six feet. It is in such cases, where both lenses are becoming opaque slowly, that an operation for artificial ripening is indicated. There are many methods of procedure, all of which have been advanced since 1881, when Foerster, of Breslau, began his operations. He was in the habit of making an indectomy, after which massage of the lens was made by a strabismus hook, the collapsed cornea intervening between the lens and hook. It is an indirect method. The operation which I prefer, and which bears Bettman's name, is a direct trituration. The pupil is widely dilated by atropine, the usual antiseptic and cocaine solutions applied, and we commence. I introduce a keratome into the anterior chamber, not for the purpose of performing an iridectomy, but simply to make an opening. Through this opening a spatula is passed, and by a concentric motion the anterior capsule of the lens is triturated. Care must be taken lest we rupture the suspensory ligament and get inflammatory symptoms. We desire to break up some of the fibres of the capsule so that some of the aqueous humor may come in contact with the lens. The lens will absorb the aqueous, swell up and ripen in a few weeks. Hence, such cataracts which otherwise might require years for maturity, will often be ripened and removed within five or six weeks. The spatula is withdrawn, a few more drops of atropine instilled and the eye is bandaged. The nurse is instructed to apply atropine twice a day and the bichloride dressing is used.

As you see, I have made no attempt to hurry. While everything is properly planned and systematically executed, an oculist can remove a half dozen cataracts within the limit of an ordinary clinic hour.

Dietetics of Chronic Heart Diseases.

Dr. Glax (*Deutsche Med. Zeitung*) calls attention to the value of decreasing the ingestion of fluids in the management of chronic diseases of the heart, a view which was warmly advocated by Oertel and others, but which has been too much neglected. If one carefully measure the quantity of fluid drunk and the urine excreted them one will remark a striking difference, for a certain portion of this fluid is retained to burden the heart's action. With withdrawal of a portion of the usual quantity of the fluid taken a continuous improvement will be noticed. From a study of this question in a large number of cases, which extended not only over months but even four to five years, he comes to the following conclusions:

1. Restriction of the quantity of ingested fluids is one of the most important measures in the treatment of chronic heart diseases, and of itself is often sufficient to bring about compensation.

2. In many cases where cardiac stimulants have failed their action will become apparent as soon as regulation of the quantity of fluid is carried out.

Care should be taken in reducing the quantity of water, as that might give rise to grave disturbances. Heart patients are especially prone to drink more than normal, which, by filling the stomach and pressing upon the diaphragm, obstructs heart action.

Rest After a Meal.

No work of any kind should be done in the hour after dinner. After any substantial meal, observe, you need all your vital force for the beginning of digestion. For my part, I always go to sleep after dinner, and sleep for exactly an hour, if people will only stay away; and I am much fond of the people who keep away from me at that time than I am of the people who visit me.—*Edward Everett Hale.—Ex.*

A UNIQUE CASE OF DOUBLE EXTRA-UTERINE PREGNANCY.

J. M. DUFF, M.D., PITTSBURG, PA.

Two years ago this month, I was called to see a woman twenty-eight years of age. She had been married for five years and never had been pregnant. At this time she had not changed for two months. Was complaining of pains in the left iliac region. I found some tumefaction. Upon a more careful bimanual examination, I diagnosed a tumor which was evidently in the left fallopian tube. The presence of this tumor in connection with the fact that she had not menstruated for sixty days, that she had morning sickness to a slight extent and some other signs of pregnancy, led me to diagnose an extra-uterine pregnancy. I advised an operation. She partially consented to it. My friend, Dr. Werder, saw the case with me. I believe he agreed with me in my diagnosis of extra-uterine pregnancy. Shortly after this the lady was suddenly taken ill and I was called in hastily. She had severe pains and a tendency to faintness, but did not entirely faint away. By the time I reached her she was flowing and upon examination I found that the tumor had disappeared from the tube. I could not find it. After this she improved rapidly and in a short time she did not call for any further medical assistance. Occasionally during this time, and subsequently, she had slight pains in the lower portion of the abdomen which were periodical in character until last March when she again missed her changes. About nine weeks after changing she was taken with hemorrhage. I was called in and found she had miscarried. The ovum was expelled from the uterus into the vagina. She got along very well after this up to the 12th of October of this year. On this date her husband came running to my office asking me to hurry to his home, stating that his wife had suddenly been taken ill. It was a very short distance to the house and when I arrived I found her in the water-closet. She was in a semi-comatose condition. Partially collapsed and almost pulseless. I had her removed to her bed; warmth and friction applied and stimulants administered hypodermically. When she recovered her senses she complained of very severe pain in the iliac fossa. She was so tender that it was impossible to make an examination by vagina. Upon further examination, however, I found a tumor in the right fallopian tube. I then got the history that she had missed her changes twice, it being ten weeks since she had menstruated. On the next morning she began to waste slowly. Some discharge of membrane. Some sickness at the stomach. I again diagnosed extra-uterine pregnancy, but in the right side, and insisted upon operation. She would not consent, thinking she would get over it in the same manner as she had the previous one. But she gradually grew worse up until October 18th, when she consented to the operation. She was taken to the South Side Hospital, and assisted by Drs. Kerr, Thomas and other members of the staff, operated.

I found a tumor in the right tube which was almost on the point of rupturing. The tumor had the appearance of a mole pregnancy as we find them in the uterus. On cutting it open we found a small fœtus enclosed in its membrane inside of it, needing no further demonstration that this was a case of extra-uterine pregnancy. We found on the left side another sack which was attached to the fallopian tube and contained some matter which was considered by all who saw it to be placental tissue. It was attached to the bowels by general adhesions; instead of dropping down it was thrown up over the uterus. A small portion of the end of the tube had split open.

The subsequent history of the case is good. There was an uninterrupted recovery. Her temperature after the operation was 101°, but soon became normal. During the third week after the operation some little indiscretion in eating caused the temperature to rise to 100°. She left the hospital last week and went to her home, her general condition being very good. I report this case as a very unique one, involving as it does a double extra-uterine pregnancy.

DEATH RESULTING FROM HEAD INJURY.

C. C. HERSMANN, M.D., PITTSBURG, PA.

Thomas F., aged forty-eight and a half years, I saw in consultation with Dr. P. G. Rossman, and obtained the following history: On March 4, 1887, while on duty as turnkey at the twenty-eighth ward police-station he, was assaulted by a prisoner who struck him several (5) severe blows upon the head, making as many cuts or scalp wounds, rendering him unable to cope with his assailant.

He was removed to the Mercy Hospital, where he remained thirty days, during the first nine of which death was expected at any time. He went to work on the 15th day of the following October. He worked about two weeks when he was compelled to give up. At the end of seven weeks he returned to his work, but after another two weeks was again obliged to lay off. At the end of five more weeks he again went to work and was able to continue for nearly a year. He then laid off with severe pain in the right ankle. Again he worked three months and then was laid off five months with pain in all the extremities, upper and lower. The right side seemed to be particularly involved. From this time to his death he suffered more or less with severe pain in the head. He was able to work only a few days at a time when he would be compelled to lay off on account of severe headache. Thus he dragged through life. Whenever he had sickness with elevation of temperature he was very delirious. On March 6th, 1894, I was called in consultation, as stated in the outset, and found the following conditions: A slight pneumonia, severe congestion of the brain and elevation of temperature with acute delirium, he having to be held in bed. On the 9th I again saw him and found him much the same except a semi-comatose condition had taken the place of delirium. He died within the next twenty-four hours with symptoms of apoplexy.

A post-mortem examination revealed the following conditions: A scar immediately above the left temple 1⅝ inches long, and one in the corresponding region on the right side 1¼ inches long. A scar directly between the parietal bosses in the region of the crown on a line with the longitudinal suture two inches long, and a scar at right angles with and crossing the aboved-name about mid-way, four inches long. The scalp at the crucial scar was adherent to the skull. On attempting to remove the calvarium, the brain and its membranes were so adherent that, be careful as I might, the cerebrum entire was torn from its position and afterwards removed from the scull-cap by breaking up the adhesions.

Pia mater severely congested. On that portion of the brain corresponding to the top of the head, there was a free exudation which was rapidly approaching pus formation. The brain was severely congested throughout, the upper portion of the cord and medulla congested. A considerable meningitis had developed.

An interesting point in this case is the fact that he not only retained his mental faculties, but he was so materially affected whenever undergoing systemic disturbances, that he must have been on the border land of insanity. Another instance in which we see the wonderful power of nature resisting the inevitable to the last.

The party who committed the deed was sentenced and served time for aggravated assault. The medico-legal point is this: Having every evidence that the injury was the cause of death, can the accused be re-arrested and made to answer to the charge of murder?

Mercurial Paste for Corns.

Morrison.

Bichloride of mercury	gr iv
Salicylic acid	ʒi
Collodion	ʒi

Sig. Apply every day, removing each time the film left by the previous application.

—*Nouveaux Remedies.*

Sluggish Conditions of the Liver.

Podophyllinæ	gr xv
Euonymin	gr iss
Extract Belladonna	gr ¼
Pil hydrarg	gr ii

For one pill to be taken at bedtime.

—*Medical Press and Circular.*

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SATURDAY, MARCH 9, 1895.

EDITORIAL.

AN OVERCROWDED PROFESSION—THE REMEDY FOR THE EVIL.

Some years ago, there was much editorial amusement over a very ungrammatical letter of indignation which a recent graduate in medicine had written after his failure to pass an examination for appointment to a hospital as interne. In language which was unmistakable in meaning if not correct in form, the doctor asseverated that he had been *defrauded* by the faculty which had graduated him. He was evidently convinced of the justice of the decision of the examining board, for his grievance was that, *knowing his lack of preliminary education*, the faculty had encouraged him to pursue a medical course, had taken his money and had given him the legal right to practice a profession, for which he now realized that he was incompetent. He further accused the faculty of desiring to have just such incompetents in the profession for the sake of obtaining fat consultation fees.

We feel that the ridicule heaped on the writer of this letter was most unjust. Lack of education is a misfortune oftener than it is a fault, and there are thousands of persons who cannot use their own language correctly who are, nevertheless, good citizens in every sense. The fault lay with those agencies which tried to lift the man bodily from that plane on which he could be a useful member of society, to a higher one in which he would not only be out of place but would be in a position to inflict much damage. When one has the manliness to admit that he has made a mistake and that he is not fit for the position he has tried to occupy, he deserves sympathy and respect, not ridicule. In his accusation of his faculty he may or may not have been justified. There are medical professors who deserve the scathing rebuke which this ignorant man has uttered, and there are others who are thoroughly conscientious in their relations with student, colleagues and laity alike.

In this anathema, however, we find the

keynote of the entire theme which we are discussing. Outside the struggle, we have an apathetic laity whose only apparent interest is the fear that the medical profession may do something that will interfere with its inherent right to consort with sectarians and irregulars and to take quack medicine. On the one side, is the rank and file of the profession struggling for a livelihood; on the other, the college faculties, whose members feel but slightly the growing hardships of competition, while they are directly benefited by the prestige of their position. The fees of students may amount to comparatively little in the revenue of college professors, as a considerable attendance is necessary merely to pay the running expenses of the college. The real object of securing a full attendance of students is the greater honor which it will confer on the institution and those connected with it, and the wider territory over which the fame of the faculty will spread.

In a country supplied with a few colleges under state supervision, with faculties chosen impartially and comprising men of pre-eminent qualifications, it would be an easy matter to limit the number of graduates. The present system of semi-private corporations has tendencies which work in a vicious circle. It is possible to select from the profession of almost any city of 200,000 inhabitants, at least three groups of doctors whose average abilities would equal or excel those of the faculty of an average medical college. It would be possible, in addition, to select two or three other groups, lacking somewhat in professional attainments but with greater business acumen and fully awake to the advantages of college professorships. The result is obvious; a combination of brains, business and brass is effected, and a new *University* (*!*) springs into life.

In a certain city is a medical school of fair reputation, abundantly able to supply the needs of the entire territory which it would naturally drain. After a time another college is started, the members of the faculty gladly paying heavy assessments to keep it running. Why? "Because the old school is not adapting itself to newer standards of education," say the faculty of the new one—in public. "Because there are a lot of men here who want to be professors and can't get into the old ring," says one of the new faculty—in private. And yet, the majority of the members of the "new ring" "are men of as great tability as those of the old ring," and have the same right to the gratification of their ambitions. It is no uncommon incident in modern times, to find three or four men competent to fill a position which all want and which only one can have. The result is sad but inevitable. There are individual cases in which influence and money have elevated to superior positions men of inferior qualifications. As a rule, in the case which we are considering, influence and money have simply been the determining factors in choosing between men of equal ability. The profession as a whole cannot blame, and should not envy, the faculties of colleges for availing themselves of the better fortune presenting. We need not consider a man dishonest because he is a stockholder in a railroad that charges three cents a mile; but, although we respect the man, it is none the less sound policy to secure legislation which shall reduce the milage rate. So, in the case of medical faculties, it is useless to criticize or to intimate that the members occupy their positions through pull, or to draw comparisons with political rings. The men themselves are usually worthy of respect and even admiration. Human nature simply is not enough altruistic for any medical faculty to close their institution and disband because they see the profession oversupplied with incompetent competitors.

The only logical and manly course for the profession to adopt, is to endeavor to

secure proper legislation which shall serve to limit the total graduating list, and thus to throw the brunt of competition upon the college faculties. The whole problem would then soon be satisfactorily settled by the survival of the fittest and the destruction of the weaker and inefficiently equipped colleges. Such a course, moreover, could not be openly combatted save by the avowal of selfish motives and of a disposition to debase the standards of the profession, while it would receive, even now, the cordial support of all the better class of medical colleges.

Fortunately, the issue is not merely an economic one. The medical profession is overcrowded but not with good physicians. Of the raw recruits who are pushing their way to the front, a relatively small proportion are qualified for the service. The solution of the problem does not necessitate the exclusion of a single worthy man; it does not demand the establishment of an unreasonably high scale of qualification; it requires merely that the coming physician shall have a passable education. The issue is one on which depends, not only the welfare of the medical profession, but to a high degree the health and chances of longevity of the entire population. If the issue can once be fairly comprehended by the physicians of the country and fully presented to the laity, the solution ought to be an easy matter.

ABSTRACTS.

THE SURGERY OF HYPERTROPHIED PROSTATE.*

THOMAS EAGLESON GORDON, M.B., B.Ch., Univ. Dubl.

The subject I have chosen for my address is the Surgery of Hypertrophied Prostate. It will, however, be convenient in the first instance, to briefly review [illegible] is known of the development, anatomy and function of the normal gland as [illegible] at least, as these are of surgical interest or importance.

If the abdomen of an early embryo is opened there will be seen, on either side of the middle line, in the lumbar region, two long vascular prominences. These are the Wolffian bodies structures composed of glomeruli and tubes similar to those found in the permanent kidney.

Leading from the Wolffian bodies there will be seen the Wolffian ducts and these pass downwards to open into the urogenital sinus.

This sinus is merely the lower portion of the spindle of the allantois; the upper part of the spindle, it will be remembered, forms the urinary bladder.

Lying internal to the Wolffian body is another structure, the genital organ; and coursing downwards, alongside the Wolffian duct, is the duct of Müller, which opens like it into the urogenital sinus. The lower part of the duct becomes fused with its fellow to form a single tube. The upper end is open into the peritoneal cavity.

These structures—Wolffian body and duct, genital organ, and duct of Müller—are the rudiments of nearly all the future genital system of both sexes. In the male, the testis is developed from the genital organ; from the Wolffian body and its duct are derived the vasa efferentia tube of the epididymis and vas deferens.

The urogenital sinus becomes the first portion of the urethra. The ducts of Müller undergo atrophy almost to annihilation. But their upper part persists as the hydatid of the epididymis, and the extreme lower united parts are represented in the uterus masculinus or prostatic vesicle. Very different is the fate of

*The Presidential Address to the University Biological Association, Dublin, 1894.

the duct of Müller in the female. Here the upper part remains as the Fallopian tube, and the remainder, the united part, forms the uterus and vagina.

It will thus be seen that the uterus masculinus must be the homologue of the uterus and vagina, or of some parts of them. It seems to be the opinion of the best modern embryologists that it is most probably the homologue of the vagina alone.

The development of the prostate itself has been lately specially worked out by Griffiths of Cambridge. The conclusions he arrives at are these—The tubules are derived from the prostatic sinuses on either side of the verumontanum—*i.e*, from that portion of the urethra which, as we have seen, is formed from the urogenital sinus.

As the tubes extend backwards they carry with them a prolongation of the external circular fibres of this part of the urethra, and this muscular tissue is seen in the fœtus spread out in slender fasciculi investing the developing tubes.

As the gland grows, it extends outwards and forwards, but the glandular part, as a rule, does not fuse in the middle line, the continuity of structure being effected by muscular tissue only.

The prostate, it will then be seen, has no developmental connection with the ducts of Müller. The uterus masculinus is no part of the prostate, but merely becomes imbedded in it in its lateral and forward growth. The prostate is not the homologue of the uterus, and we have seen that even the uterus masculinus is probably the homologue, not of the uterus but of the vagina only.

I need occupy only a very few minutes in describing the adult gland, particularly as I have some lantern slides to show, which, with Professor Cunningham's kind permission, I have been enabled to obtain from his frozen sections of the pelvis.

The prostate is composed of gland and unstriped muscle, the latter forming nearly three-fourths of the whole. The glandular part is made up of branching tubes, ending in tubular alveoli lined with columnar epithelial cells.

The average weight of the normal gland is about six drachms. It measures in its long axis, which is nearly vertical, about one and a-quarter inches, and it is about one and a-half inches in width. In form the prostate is roughly conical, and is usually described as having three lobes. The existence of the middle lobe has been questioned, but Griffiths has shown that it certainly does exist in a considerable number of cases. The base of the prostate rests against the bladder, about the internal urethral orifice. The term neck, as applied to this region of the bladder, is objectionable, as no constriction occurs about the urethral opening such as this term would seem to imply. The urethra traverses the gland at about its centre, and I would remind you that this portion of the urethra is almost vertical in direction. In front the prostate is separated from the lower part of the symphysis by a distance of about three-quarters of an inch, and behind is in close relation with the second part of the rectum. It is placed at a much higher level in the pelvis than is, I think, usually appreciated, its base being opposite some point on the upper half of the symphysis.

The gland is firmly fixed in position by the fascial connections of its capsule, so that it only sinks to a slight extent when the bladder is distended. If it is desirable to overcome the slight fall, for operative purposes, it can be prevented by a moderate distension of the rectum. The presence of this fixed support about the orifice of the urethra will easily explain the occurrence of a post-prostatic pouch when there is any cause of obstruction to the urinary outflow. In prostatic cases it will, of course, attain its greatest degree, because the sinking of the bladder behind the urethral orifice will be accompanied by a raising of the orifice itself, depending on the upward direction of the enlargement.

Within the capsule is the prostatic venous plexus. These veins become dilated and varicose in old age, and their valves disappear. Immediately beneath the mucous membrane of the urethra there is another smaller plexus which undergoes similar changes. These veins communicate freely with the hemorrhoidal and other veins in the neighborhood, and this fact, taken in conjunction with the absence of valves, explains the frequent congestions of the prostate—congestion which is sometimes sufficient to cause complete retention. The varicose submucous plexus is of interest as explaining the occasional occurrence of severe hemorrhage after the passage of instruments in these cases.

Although surrounded in this way by venous plexuses, the blood-supply of the prostate itself is remarkably small, and unless the venous plexuses are encroached on, large portions may be removed without causing severe hemorrhage.

The most important point to be determined in connection with the function of the prostate is whether it is or is not essentially a sexual organ. The solution of this problem has been arrived at by observations of prostatic changes in certain of the lower animals, which have distinct periods of sexual rest and sexual activity.

These observations were first made by John Hunter many years ago. He writes as follows:—"In the mole the prostate gland in winter is hardly discernible, but in the spring becomes very large and filled with mucus." This fact was confirmed by Sir R. Owen, and during the last few years by Griffiths. Griffiths' observations are of particular interest, since they include microscopic examinations. I need not delay to describe them in detail. Suffice it to say, that they fully confirm John Hunter's early observations—that they show that the prostate undergoes an enormous increase in size during the breeding season, and that this increase is accompanied by important changes in the shape and number of the epithelial cells lining the gland tubes, and by equally marked changes in the muscular stroma. These interesting facts, I think, conclusively show that the functional activity of the prostate in these animals is closely dependent on the functional activity of the testes, and this relationship would seem to justify us in regarding the prostate as an accessory sexual gland.

This conclusion has received confirmation from the effects on the prostate which have been observed to follow castration in many animals. In Hunter's works the following statements occur:—"The prostate and Cowper's glands, and those of the urethra in the perfect male, are soft and bulky, and the secretion salt to the taste. In the castrated animal these are small, flabby, tough, and ligamentous, and have little secretion. Especially marked is this change when the animal is castrated when young." These observations have received striking confirmation by Griffiths and White, and it has now been absolutely proved that the prostate will undergo atrophy whether the animals are castrated when young or when they have attained to adult age. The experiments conducted for White are particularly interesting.

The average weight of the prostate was first determined by experiments on 35 dogs. Taking the average weight in dogs weighing 14 to 16 kilos. as 15 grammes—in one case, 17 days after castration, the prostate was found to weigh only 5½ grammes instead of 15. In another dog, in which the average weight of prostate relative to its weight was 19 grammes, it weighed only 2½ grammes about a month after castration. There were, in all, twenty-four experiments performed, and in every case the results were equally remarkable. Microscopic examinations were made in each, and showed atrophy of both glandular and muscular elements.

The prostate is then undoubtedly a sexual organ, and recent experiments tend to show that it is not only accessory but essential to fertilization. This fact has been proved by experimental removal of the prostate. In the animals so treated the power of copulation remained, but they were incapable of reproduction of their species. Such being the case in the lower animals, one might, with tolerable safety, conclude that the prostate has a like function in man, and that castration would lead to either nondevelopment or atrophy. The direct evidence is, unfortunately, very unsatisfactory, and is almost confined to the case of a few eunuchs. We must, then, speak with caution, but as far as these imperfect observations go they confirm the results which we would in the first instance have anticipated.

I think it would be very unsafe to dogmatise concerning the exact part which the prostatic secretion takes in fertilization.

Föroringer is of the opinion that its function is to awaken the latent vitality of the spermatozoa. He found by actual experiment that the addition of prostatic fluid to testicular secretion caused movements in spermatozoa previously quiescent.

It remains to consider the relation of the prostate to micturition. This long-vexed question concerning the sphincter of the bladder can scarcely be said to be definitely set at rest. The true voluntary sphincter of the bladder is probably situated near the apex of the prostate, and

consists of a circular band of tranversely striated muscle, named after its discoverer, the external sphincter of Henle. The portion of the urethra above this may, perhaps, almost be looked upon as part of the bladder, but unless there is considerable urinary tension it is kept closed by the elastic pressure of the prostate which surrounds it.

Leaving this necessarily somewhat lengthy introductory matter, I will proceed to the discussion of the more purely surgical part of the subject.

The enlargement which I have now to speak of is almost certainly a glandular hypertrophy. The fibrous form may be regarded as merely a later atrophic stage. Of the cause of this enlargement absolutely nothing is known. We cannot even state with certainty its time relation to the cessation of sexual function, for, although the testes may become inactive at fifty, it is undoubtedly true that they may continue active until seventy or later. A discussion of the numerous theories would be mere waste of time, but I cannot resist a short reference to one, that of Mr. Reginald Harrison. He endeavors to prove that the enlargement is a compensatory change formed to oppose a sinking of the bladder behind the prostate, which he says, tends to occur in old age.

To support such an extraordinary, so improbable, a theory, one would expect to find very convincing proofs that this sinking of the bladder does occur—such proofs are not forthcoming. Further, the enlargement is not fibrous, nor even muscular, but, as I have said, almost certainly glandular; and even Mr. Harrison will hardly think it possible that a gland should increase in size in order to support some superimposed structure.

Again, in certain of the lower animals—*e. g.*, dogs—this enlargement occurs, and in them the axis of urinary pressure is entirely different. The only difficulty which Mr. Harrison himself recognizes is the occurrence of those masses which sometimes grow up into the bladder. This he explains by the following amazing statement:—"I would speak of these as the upheavals of a frequently contracting muscular ring." My respect for Mr. Harrison as a distinguished surgeon will prevent me expressing what I think of this volcanic utterance. It is surely a *reductio ad absurdum*, and I would have made no reference to the theory were it not an excellent example of the dangers attending speculation on so obscure a subject.

Before discussing the operations proposed for the relief of prostatic hypertrophy, it is scarcely necessary to make the statement that a very large majority of all such cases require no treatment other than properly conducted catheterism, and such a regulation of the general mode of life of the patient as may be best suited to his condition. Setting aside these cases there remains a minority in whom these simple methods are no longer sufficient. I will briefly consider what indications we have that such a stage has been arrived at. First in importance is frequency of micturition. The principal causes of such frequency are an increasing proportion of residual urine, cystitis from whatever cause, and, thirdly contracted bladder. This latter condition, though apparently uncommon, is one of great importance, since it may be regarded as a certain indication for operative interference. A patient in this condition, as Sir H. Thompson puts it, lives for little else than to pass his catheter, and has arrived at a stage that is the almost certain prelude of approaching death.

In addition to extreme frequency and conditions, such as cystitis, specially associated with it, I wish to remind you of certain other indications of the approaching end to catheter life. One is increasing difficulty in the passage of instruments due to the particular nature of the growth. Another is repeated hemorrhages. A third the presence of a calculus.

The occurrence of these signs may be regarded as the advent of a further stage in the life of the patient with prostatic hypertrophy. The further course, if untreated, is one of continuous decline. It is marked by signs of general deterioration—such as progressive emaciation, loss of appetite, and thirst with dry and coated tongue; and at times by graver symptoms as a remitting fever or recurring rigors. These, when combined with signs of local deterioration—increasing frequeney, increasing proportion of residual urine, and at times, it may be absolute retention—complete a picture only too familiar and point with certainty to the coming of the death.

That this sequence of events may be expected when the signs we have mentioned become manifest, has long been recognized by surgeons; and it will be convenient to briefly consider, first, what have been considered the limits of surgery in these cases up to recent times, as this will enable us to better estimate the degree of progress that has since been made.

It is only during the last few years that, for this further stage, any operation has been undertaken of a radical nature. It is indeed true that every now and then operators, who either held a great reputation or wished to obtain such, proposed and practised cutting operations on the prostate, but none of these received universal sanction and they do not even receive mention in standard text books of surgery. The palliative measure most deserving of attention is perineal drainage. This operation was brought prominently before the profession by Sir H. Thompson some ten years ago, and, needless to say, is based on sound surgical principles. By getting rid of the necessity for frequent catheterism, it furnishes rest for the patient, and by affording excellent drainage in *most* cases it gives rest to the bladder and urethra and does much for the relief or cure of cystitis.

But while fully recognizing the excellent results obtained in many cases, we cannot overlook certain limitations to its usefulness.

1. It is unlikely to afford sufficient drainage if there is much post-prostatic pouching of the bladder.

2. If the prostatic urethra is much lengthened it cannot allow of digital exploration of the bladder—a calculus might in these cases easily be overlooked.

3. If catheterism has been difficult on account of the form which the enlargement has taken, this difficulty cannot but again present itself when the perineal wound has closed.

That there are such limitations is, of course, fully recognized by Thompson, and he has recommended another operation as a substitute for it or as a sequel to it. This operation is suprapubic cystotomy for exploration purposes, and the subsequent maintenance of a permanent opening, in which is fixed a shielded silver catheter. Sir H. Thompson gives some details of a case thus operated on as a proof of its success.

This was "an advanced case of constant and painful catheterism." A suprapubic exploration was carried out in 1886, "and dense fibrinous deposit and much adhering phosphatic grit were successfully removed," and the patient was able to walk abroad in about a month. Now mark his condition: he was able to walk three or four miles a day, was free from pain, and his general health was on the whole good, but he had constantly to wear his silver cannula, and supplemented his own faulty anatomy with the ordinary urinal worn by persons requiring such a convenience. Instead of the simple method of relief which normally precedes sleep, this unfortunate man had to wash out a large part of his urinary tract. First, he removed and washed his cannula, then, I suppose, he cleaned out his rubber bag, and, lastly, the relics of his bladder.

Now I have no doubt this man's condition was much improved, but, I think, he surely had no elysium here on earth, and would welcome the time when he would be called upon to shuffle off this mortal coil and his artificial bladder for ever.

I have endeavored to state, as clearly and briefly as I could, the most which a surgeon can expect to do for these advanced prostatics if he keeps to the beaten tracks of what I will call orthodox surgery; and I will now lay before you the newer operations performed and the results achieved by men, some of whom I am pleased to look upon as pioneers of nineteenth century surgery.

First amongst such operations I will place suprapubic prostatectomy. For the introduction of this operation surgery is certainly indebted to M'Gill, of Leeds; for, although isolated instances of its performance occurred from time to time, it never received any serious consideration until its claims were urged by M'Gill in his Leeds Address before the Medical Association in 1889.

It would be beside my purpose to here discuss the technique of the operation. Suffice it to say, that an opening is made above the pubes. The interior of the bladder is carefully examined and the growth removed. The object in all cases is, first, to remove any protruding intravesical growth, and, secondly, to provide a low-level urethra which will be capable of draining a post-prostatic pouch. The

first portion of the urethra should be digitally examined, and if it is necessary to extend the operation to this region it is considered well to add to the supra-pubic opening another in the perineum to drain this portion of the urethra.

This account, though brief and imperfect, will, I think, sufficiently show that this supra-pubic prostatectomy is an operation of the greatest possible gravity. It matters little what published statistics show; common sense, which is often a better guide than statistics, will clearly show to any man possessed of it, that this is an operation attended with the greatest possible risks to life, especially in the case of such patients as these. Granting this, it is evident that to justify its performance its advocates must show us results better than can be obtained by other safer means. Particularly they must show—

1. That the obstruction will not recur in even a large minority of cases.

2. That the function of micturition will be restored in a fair proportion of cases.

3. Or, failing this, that the patient will be once more able to resume his catheter life with far greater comfort and success than previously.

As regards recurrence, it is satisfactory to find only one instance of it in ninety-four cases recorded by Maunsell Moullin; and any opportunities which have arisen of subsequent examination have confirmed clinical results.

Concerning the restoration of micturition by this or other forms of prostatectomy, Sir H. Thompson makes the following statement in his Clinical Lectures in 1888, not since, as far as I know, contradicted: —"I have long wished to see this sight, and have travelled considerable distances abroad and elsewhere expressly seeking it, but at present without success."

Now, it requires most convincing, overwhelming evidence to overthrow this opinion stated by the greatest living master of urinary surgery. I believe such evidence is forthcoming. I cannot discuss the matter at length, but I would instance particularly several of M'Gill's cases published since Thompson's lecture, a case recorded by Buxton Browne, and again, at all events, one of Mayo Robson's twelve cases.

But apart from this very severe test, the restoration of the function of micturition, this operation of supra-pubic prostatectomy has shown such excellent results as to justify its holding a definite place in surgery. I think we should, however, insist that as an operation it must be confined to a very limited class of cases—to men who are no longer able to live with the aid of catheterism alone, but who still possess sufficient strength to undergo a major operation, an operation likely to be attended with severe shock, and, it may be, considerable loss of blood. For the remainder—the far advanced cases—there is, I believe, at present one chance, and one only, and that a perineal section.

I have not thought it necessary to consider other procedures which are, for the most part, only modifications of perineal section; but quite recently an entirely novel operation has been proposed which I must now refer to. The operation cannot at present be said to hold any definite position in surgery; but the very fact of its being on its trial will, I hope, give it the greater degree of interest. This operation is double castration.

I will lay before you the arguments which have been held by some to justify its experimental performance:

1. The prostrate is a sexual gland, the homologue of the uterus.

2. The uterus undergoes atrophy at the menopause, whether occurring naturally or induced by oophorectomy.

The conclusion drawn is, that the prostate would undergo atrophy if the testes were removed.

This argument is somewhat weakened by the fact that the prostate is not, as we have seen, the homologue of the uterus; but, nevertheless, we are justified in thinking that the prostate, a sexual gland, will atrophy with the whole generative system on removal of the master organs, the testicles, just as the whole female generative system atrophies when the ovaries cease to functionate.

To obtain additional light, experiments have been carried out on the lower animals, and these, you will remember, conclusively prove that the normal prostate atrophies after castration in them. This would lead us to expect a similar change in man. But, as I have said, the evidence is not very convincing, and applies almost entirely to eunuchs; and it is manifestly a very different matter that growth should

be arrested than that a fully-developed gland should atrophy. However, quite apart from this evidence, it seems to me exceedingly likely that the normal prostate would atrophy in men if the testes were removed, for it does so in dogs, and there is no reason to suppose its functional position, with regard to the sexual apparatus, different in them to what it is in us.

Granting in this, we are still far from having solved the problem before us; for, although a normal prostate atrophies, it does not necessarily follow that a morbid one will do so. Nor do we know enough about the hypertrophied prostate to say that this is even likely. If we could say that the enlarged prostate was the result of excessive sexual activity the case would be very different; but I am convinced that there is no proof of any kind that such a causal relationship exists. Buxton Browne says he is "more and more struck by the fact that prostatic hypertrophy often follows a second marriage or a marriage contracted early in life." This vague statement is quite worthless. Besides we must bear in mind the important fact, that the hypertrophy occurs, not during the period of greatest sexual activity, but when that function is on the wane.

I would have considered that the argument in favour of castration were not such as to justify its application to men. I would have thought the proper course to pursue would have been to have obtained animals whose prostates had undergone hypertrophy — doubtless, a matter of difficulty—to have castrated them, and, if the results were satisfactory, I would have considered the experiment on man justifiable. Fortunately for surgery, others with better right to an opinion have not considered this intermediate step, with its accompanying delay, necessary; and now the operation has been performed quite a considerable number of times.

The operation was first performed by Ramm, of Christiania, in April, 1893. Since then by Haynes, Professor White, Fremont Smith, and Maunsell Moullin. The results are very satisfactory.

I need only refer in any detail to one case, and I will select the last which I have read of—an operation performed by Maunsell Moullin, in June last, and reported in the *British Medical Journal* of November 3. The patient was eighty-one years old. He had complete retention, due to an enormously enlarged prostate, as felt per rectum. No catheter could be passed, so the bladder was aspirated above the pubes. After this the necessity for some permanent operative relief became urgent, as the man could not sufficiently relieve himself, and he was losing ground. Supra-pubic prostatectomy was out of the question, so the choice only lay between a perineal drainage or castration. Moullin decided on attempting the latter, and performed the operation with the following results:—In ten days the prostate was smaller, and after three weeks all that could be felt per rectum was a fusiform thickening extending along the catheter, so small and soft that the shaft could be felt everywhere through it. An ordinary catheter could be passed with ease.

This result is truly wonderful; and all the other operations performed up to the present appear to have been nearly equally successful.

We may, then, safely conclude that castration can cause an atrophy of a hypertrophied prostate; and, further, that perhaps one would be justified in performing the operation in certain advanced cases as a substitute for perineal drainage. We must remember, however, that, as an operation, it is still in the experimental stage.

This operation of castration brings us to the furthest limit of advance in this branch of surgery, and I will, in a few words, state the conclusions which can, I believe, fairly be drawn from a general review of the subject:

1. Now, as formerly, the large majority of cases require no treatment except regular catheterism.

2. For some, however, this is insufficient, and we may then resort to suprapubic prostatectomy if the patient seems to have sufficient strength.

3. For the very old and feeble there is at present only one operation recognized by surgery—*i.e.*, perineal drainage.

4. But now it seems possible that we may have in double castration an alternative measure. The results already obtained make us hopeful; but I think at present Irish surgery can afford to wait. —*Doublin Jour. of Med. Sci.*

Insect Bites.

Ammonia water	45 minims.
Collodion	15 minims.
Salicylic acid	1½ gr.

S.—One drop to be applied to each spot affected.

SOME THOUGHTS ON THE METHOD OF RELIEVING AN OBSTRUCTED BOWEL.*

W. THORNLEY STOKER, PRESIDENT R. C. S. I.

It is the privilege of the President of this Section to address the members at its opening meeting on some matter of surgical interest, and it is an occasion when one may fairly be excused if he elects a topic to which he can apply his experience rather than one of the novel and obscure subjects in which the theorist delights to revel, and which capture the intellect rather than deal with every-day incidents of our surgical life.

I do not intend to go far afield for material, because it seems to me that the importance of facts is to be measured by their commonness, and that just as the dignity of labor overshadows the greatness of kings, so the most frequent incidents of our surgical life throw the curiosities and rarities of our science into the shade. Common surgery means universal surgery, and implies that which may be cultivated to the greatest good of the greatest number. What Tennyson has called "the falsehood of extremes" is one that creeps very insidiously into the daily life of the enterprising surgeon. There is a tendency to argue from extreme or rare and individual cases, and to lose sight of broad and collective issues. How often we see elaborate and able papers written with a view to deduce a theory or a practice from a particular and eccentric instance, and the paucity of material concealed by an overshadowing cloud of science condensed from the literature of half a dozen modern languages. This "paper-making" or encyclopædic style is destructive to a fine cultivation of our science, but it is a less evil than that which it conceals—the undue craving after originality. Every second surgeon wants his name connected with an operation or an instrument, and in this age of hot and unwholesome competition the hunger is disastrous to the quiet and perfect digestion of abundant material which waits on normal appetite.

As far as my sight reaches I can see no direction in which the craving for novelty and originality has caused men to overstep themselves more than in the operations undertaken so often and with such a light heart for the relief of some forms of obstruction of the bowel. The hateful expression that "there is practically no danger in opening the peritoneum" is ever before the reader in these days, and, as regards a class of cases I wish to speak of, a more false or poisonous teaching was never promulgated.

It is more than five years since I read before this Section of the Academy a paper "On the Treatment of Acute Intestinal Obstruction due to Collections within the Lumen of the Bowel," and I am here now to repeat with every force I can, and with what added weight time, experience, and the position I now hold, may give to my words, the doctrines I then enunciated.

Do not let anyone misunderstand me—although I hold that we live in a time when there is too free a resort to operation in general, and although we may look for a subsidence of the wave and a return to a normal level—yet I have no cry to raise against the general advance of the operative treatment of the bowel—that would be foolish as well as futile. I have no word to say now against laparotomy in any class of cases save one, and even in that class I make no wholesale condemnation, but only urge that it shall be adopted after grave consideration and in selected instances. My remarks do not apply to obstruction due to neoplasms growing in the substance of the bowel, or to pressure on it by peritoneal or intraperitoneal material; but to those very common cases in which, owing either to an atonic intestine failing in its peristalsis, or a normally strong one becoming overloaded by its contents, the balance between the propulsive power of the bowel and the load it has to move is destroyed. The result is the decreasing power of the gut, its extreme distension, and the production of the condition named *ileus*

* The Presidential Address delivered at the opening of the Surgical Section of the Royal Academy of Medicine in Ireland, Session 1894-95.—The Dublin Journal of Medical Science, February, 1895.

paralyticus. We seldom see these cases until they have arrived at an advanced stage, until great addominal distension has taken place, and until the issue is very evidently one of much gravity.

I have seen a great number of such cases in my own practice and in that of others, and I wish to reiterate the opinion I have already expressed that laparotomy is in them an extremely fatal operation, and should be undertaken only when other legitimate means have been exhausted, or where they are evidently improper owing to the advanced stage or general condition of the case. To formulate rules as to when or in what condition such an operation might be undertaken is not possible except to the book-surgeon. The man who has practical experience knows that abdominal surgery cannot be reduced to a formula, and it is long experience and the tact which may be cultivated, but cannot be conferred, that teach us when we must and may open the abdomen in *ileus paralyticus.* To be sure, even the most skilled may fall into the error of delay, and there is no case so surrounded by doubtful problems as that of which I am speaking.

As regards antecedent treatment I have not much to add to, and nothing to subtract from, what I have already urged in the paper I have quoted.

Of the ordinary local measures, such as the application of heat and rubefacients, I have a growing dread. I have never seen them doing substantial service, and I have repeatedly witnessed their production of such superficial redness and inflammation as served to obscure diagnosis and increase the dangers of operation. If poultices or massage be employed they should be used in such a degree as to soothe or stimulate, but not to produce irritation.

Of the value of belladonna, if used freely and early in the case, I still hold a favorable opinion, and I am convinced that its best therapeutic effect is obtained by administering it if possible uncombined with opium. I have nothing to take from, or add to, the ideas I have already expressed about this drug. Its action is understood, and its administration logical. It relieves pain, while it does its work. It finds its chief use in those cases of peristaltic paralysis due to tympanites or fæcal accumulation, and as these are most often seen in obese persons, and are attended by great meteorism—both conditions which render operation extremely dangerous—this drug is often an alternative with the knife. It should be given in full and repeated doses, and pressed until it shows its constitutional effect by producing either dilated pupil or dryness of the throat. The latter symptom is that most usually seen. It is perfectly useless employing this drug unless it be administered to its full extent. It may generally be combined with calomel. It is remarkable that whereas the tolerance of belladonna when given in chronic obstruction is very variable and its employment requires caution, it is extremely well borne in acute cases. The weak and impeded heart which is present in so many examples of acute obstruction is materially aided by the use of belladonna, which is a most excellent cardiac stimulant.

Of opium itself I still have a respectful terror; it masks symptoms so much that it is capable of being a very destructive agent. Nothing but severe pain indicates its use, and in view of the vomiting which is generally present, it is best employed in the form of morphine, and best administered by the hypodermic method.

Of the early employment of purgatives I am even less afraid than formerly, but I have somewhat modified my opinion as to the best drug to use. While I have not relinquished calomel, I rarely employ it except in combination with belladonna. I have a growing fondness for salines. I generally use the sulphate of sodium, and give it in hourly doses of one or two drams until an ounce or more has been administered. The worst that can result from the use of a cathartic that fails to purge is disturbance of the stomach, and this unhappily is such a usual incident of these cases that it is of less moment than it otherwise would be. The difficulty of giving a purgative is often very great on account of the vomiting which exists, and in such cases their administration by the rectum is occasionally successful. Before using a purgative in this way the rectum should always be washed out with warm water. The greatest therapeutic *desideratum* of our day is a method of catharsis by hypodermic medication; and whoever can discover a purgative capable of this mode of introduction will have done as much for humanity as Jenner or Simpson.

Nothing is more perplexing than the problem of how to purge a patient whose stomach rejects everything that is introduced into it.

Of all the points in the treatment of an overloaded or paralyzed bowel there is none on which my convictions remain stronger, or in which, pleasant to relate, I have seen more improvement in method than in the use of the long enema tube. I have spoken in no uncertain fashion of the uselessness and danger of that instrument called "O'Beirne's tube," all the more awful because it was—and, I fear, still is—the custom to teach that it is safe, and its employment so free from danger that even unskilled persons may use it. Mr. Treves was, perhaps, the first writer to cast discredit on this hoary impostor. It is not enough to recognize its danger unless we also admit its comparative uselessness. Life may be destroyed by it. It is rigid enough to perforate the bowel; and I know cases in which this result has, by a little untrained energy, been achieved. I will undertake to perforate the coats of any average rectum with an ordinary gum elastic long tube, such as is usually supplied by instrument makers; and what can be done may be done, if either enough will or sufficient ignorance be present. So much for its danger; what of its uselessness? I contend that no mechanical effect can be gained by the introduction of fluid into the bowel which is not possible with an instrument 9 or 10 inches long, assisted by the natural penetrating quality of water, by gravitation produced by the posture of the patient, and such gentle pressure as that afforded by the use of a tube to which I shall presently refer. The absurdity of supposing that a pipe can be passed through the sigmoid flexure must be evident to those acquainted with the anatomy of that bowel; and the obvious explanation of the instances where, on external examination, it seems to have been done, can be a difficulty only to the tryo in the dissecting-room or dead-house. The length of mesentery possessed by the sigmoid bowel will often permit it to be pushed into the upper zone of the abdomen by the intrusive instrument. Nor must we overlook the danger of the force with which an injection can be introduced by the powerful pump usually employed with the long tube. I have seen a bowel which had been ruptured with fatal effect by this agency alone. As regards the use of medicaments other than water, and supposed to be solvent—such as oil or oxgall—I disbelieve in their efficacy. They have no effect except whatever moral one they may exercise on the patient or his friends. All that can be done, can be best done by warm water alone.

For some years past I have used but two instruments for giving enemas. One is an ordinary Higginson's syringe, to the nozzle of which a No. 12 or 14 red rubber catheter has been attached. For the daily purposes of the rectal toilet, or in cases where the injection is to be retained, or ejected by natural effort, this will be found perfect. It is absolutely safe, and quite painless. It can be used in the most tender infant or the most callous adult; and in instances where injection is called for in the presence of inflamed piles, it is a blessing without any disguise.

The second instrument is an ordinary red rubber tube ⅛ to ¼ of an inch in diameter, such as is used for washing out the stomach. It is convenient to have circles marked at 3, 6 and 9 inches from its extremity, so as to know what length of it lies in the rectum. A large funnel should fit the dilated extremity and should be transparent, so as to allow the fluid, which is being introduced, to be seen.

The patient lies on his back or left side with the pelvis raised, so as to facilitate the passage of fluid into the sigmoid and descending colon. The only fluid that should be used is warm water, and 8 or 10 gallons of it may be employed at one sitting. The surgeon sits on the right of the patient's bed, introduces the end of the tube, and retains it in position with his left hand, while with his right he holds the other end of the tube, into which the funnel is inserted. The tube is introduced 3, 6 or 9 inches, as may be indicated, and should be occasionally moved up and down in the anus by the left hand. An assistant pours water in the funnel, and the pressure may be varied and adjusted by the height to which it is raised by the operator. The left hand can be used at any moment, when the pressure in the rectum becomes painful, to pinch the tube, and stop the flow. When as much water has been introduced as can be borne, the funnel is removed,

that end of the tube lowered to a basin placed on the floor, and the fluid allowed to run out of the bowel. By repeated operations of this kind large quantities of water may be used, and the bowel emptied without the patient being exhausted by straining or by the necessity of changing his position. The solution of fæces and expulsion of flatus are assisted by the pushing in and out of the tube which I have indicated, and by the varying hydrostatic pressure, caused by alternately raising and lowering the funnel at the free end of the tube.

The advantages of this method over older ones are as follows:

1. The tube is soft and cannot cause injury.
2. The fluid pressure can be regulated to a nicety, and cannot be made excessive; as if undue pressure threatens, regurgitation into the funnel takes place.
3. Enormous quantities of water can be used.
4. The currents created by altering hydrostatic pressure have a powerful solvent effect on the fæces.
5. The operation necessitates no exertion on the part of the patient, no change of position, and can be carried on for a long time without causing exhaustion.

I trust I may be excused for entering into a detail of this kind in the presence of so many accomplished surgeons; but there are many young ears present into which my words may pass. I cannot but [illegible] this apparently simple procedure [illegible] the greatest improvements which [illegible] introduced into the treatment of bowel obstructions. I have avoided many laparotomies by employing it, and I believe have seen a number of lives saved. Like all other surgical practices, it gains value by experience; but I am convinced that those who patiently employ it will esteem it as highly as I do; and I earnestly urge on my younger colleagues the abandonment of the old rigid tube and the adoption of the simple rectal armament included in the two instruments I have spoken of.

It is not alone in cases of fæcal obstruction that this method finds its use. In every instance where it is sought to unload the bowel it will be found of service. It may be used with excellent effect in the paralysis of peritonitis, and will, in that difficult case, produce evacuation where other means have failed.

There is no organ of the body which requires more tender treatment than the bowel, and none which is so often left to be dealt with by the unskilled or uneducated. Many surgeons delegate the use of the enema to an assistant, as if this potent engine were unworthy of their own attention, and many who use it employ undue force. "No force" should be the postulate of our work with the intestine. We cannot be too persuasive, and it is because so much bad practice with regard to the use of the enema is followed, that I have ventured on such an occasion as this to urge my views against the use of a rigid tube, and to plead for one which has both complete safety and infinite advantage in point of merit. I offer you no weary list of cases, because, after all, they are useful only to substantiate opinion, and if you cannot accept a man's deliberate opinion you are not likely to put faith in his cases. Cases can be twisted to prove anything. In such a position as that which, by the kindness of the Fellows of this College, I occupy, a little dogmatism may be excused, and I feel so strongly about this matter of the tube that I have ventured to deal with it in preference to some more brilliant or alluring topic. I beg you to believe that if I speak forcibly it is because I feel conviction, and when I argue for the total abandonment of the older form of tube I desire to assure you that any words I use are spoken with a full recollection of the gravity which my office attaches to them.

Of course the great difficulty to be overcome in acute obstruction is that of diagnosis, and even to the most experienced no finality is possible. There is no branch of surgery in which extended clinical observation and careful reasoning work better together. A simple process of logic will help the most trained clinician to a true conclusion. No cases afford more opportunity for the display of high surgical qualities than those of which I have spoken. Given the proper faculties of observation and deduction, the two qualities which combine to produce great surgical fitness are Thoroughness and Resource, and in the management of obstruction of the bowel there is the most ample opportunity for their development.

THE LIBRARY TABLE.

BOOK REVIEWS.

OBSTETRIC SURGERY. By Egbert H. Grandin, M.D., Obstetric Surgeon to the New York Maternity Hospital, Gynecologist to the French Hospital, etc.; and George W. Jarman, M.D., Obstetric Surgeon to New York Maternity Hospital, Gynecologist to the Cancer Hospital. etc.; with Eighty-five (85) Illustrations in the Text and Fifteen full-page Photographic Plates. Royal Octavo, 220 Pages. Extra Cloth, $2.50, net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

AND

KLINIK DER GEBURTSHULFLICHEN OPERATIONEN, von Heinrich Fritsch, Professor der Geburtshulfe und Gynakologie, Director der Koniglichen Universitats-Frauenklinik zu Bonn, 1894.

Here are two valuable volumes; the first the joint work of two doctors whose names are well-known to the American profession, the other the single work of one of the best of German teachers; each volume devoted to the same subject.

Swift said, "The most accomplished way of using books at present, is two-fold; either, first, to serve them as some men do lords, learn their titles exactly and then boast of their acquaintance; or, secondly, which is indeed the choicer, the profounder and the politer method, to get a thorough insight into the index, by which the whole book is governed and turned like fishes by the tail. For to enter the palace of learning by the great gate, requires an expense of time and form; therefore, men of much haste and little ceremony, are content to get in the back door." . . . "The physician discovers the state of the whole body, by consulting only what comes from behind. Thus men catch knowledge by throwing their wit on the posteriors of a book, as boys do sparrows with flinging salt upon their tails."

Without adopting the superficial method of using books, thus exposed by the satirical Dean, we have thought that a brief, though necessarily imperfect, comparison of these volumes would be useful. The American work has, including the index, 207 pages, and the German 307; the latter too, has rather a larger number of words on a page. The American work presents 84 illustrations, the German 91; the former has several full-page plates, but the German none. So far as the illustrations are concerned, in an artistic point of view the American volume is much the superior. And so far as relates to paper and printing, its superiority is very great.

Both Drs. Grandin and Jarman, and Professor Fritsch dwell at the outset upon asepsis and antisepsis. The former in their joint work lay down rules which we wish every obstetrician would read and remember; many a life would be saved were these rules observed. Here is a passage we must quote, though our space is limited: "If there is one thing more dangerous to the patient than another, it is the vaselin which it is customary to use as an emollient. The vaselin-pot should, once and for all, be banished from the lying-in chamber." Again they say, and we heartily endorse the statement "Creolin will answer as a lubricant for the finger and for the instruments, and this should be the only lubricant allowed in the lying-in room, unless the physician prefers to use sterilized oil." More than once they refer to a solution of creolin: scientific accuracy ought to characterize a scientific book—we have used creolin as an obstetric antiseptic for some years, but we have not seen a solution of it in water. Fritsch commends lysol, and we think from what we have seen, that in Germany it is displacing creolin.

Several pages in the American work are given to pelvic deformities, and in the German a greater number to the mechanism of labor.

In each work the questions as to the application of forceps are well presented. Fritsch refers only to the Nægele instrument, while the American authors mention instruments, especially different varieties of axis-traction forceps, also giving illustrations. Turning is well-presented in each book, only we miss the many illustrations given in the American; the German has not one.

Fritsch presents some subjects not mentioned by the other authors, *e.g.*, cervical hypertrophy, single and double monstrosities, injuries to child in extraction, inversion of uterus, resuscitation in apparent death of the child, etc. On the other hand, much more room is given to some subjects, *e.g.*, symphysiotomy, by the Americans than by the German.

Space does not permit continuing the comparison, and in conclusion we can heartily commend the volume of Grandin and Jarman to the American obstetrician. We might question, for example, the orthography of Beaudolocque, for the first *e* has no right in the name. We might point out also some very careless writing, *e.g.* "The nature of many of the antiseptic agents on which we must needs rely is poisonous to the human body." Would it not be better to say, Many of the antiseptic agents on which we must rely are poisonous? Why should a woman in beginning labor, not be so spoken of, instead of saying she, "is about to perform a physiolgical act? There are many similar faults in the book. But life is short, and the busy doctor, for whom the MEDICAL AND SURGICAL REPORTER especially exists, will not wait for them to be pointed out; he will buy the book, read it, and find in the reading and in its application much good.

P.

DISEASES OF THE EAR. A Text Book for Practitioners and Students of Medicine. By Edward Bradford Dench, Ph.B., M.D., Professor of Diseases of the Ear in the Bellevue Hospital Medical College. Octavo; 645 pages; 8 colored plates and 52 illustrations in the text. New York: D. Appleton & Co. 1894.

In 1891, Dr. B. St. John Roosa published his valuable practical treatise on the Diseases of the Ear, Seventh Edition. Then followed the able work of M'Naughton Jones, and Stewart, of London. In 1893, there was placed before the medical public the translation of the elaborate works of the two great masters in this department, Professors Politzer and Geuber. At the same time there was published in Germany the exhaustive work of Schwartze and Nebant-Schetsch. Now we have the works of Hovell, of London, and Dench, of New York. Mark T. Hovell's smaller book is instructive and practically useful from his long experience in diseases of the throat, nose and pharynx.

The present volume combines all the good points of the most recent works, as well as descriptions of the various manipulative procedures, for the benefit of those not familiar with the subject. In a careful reading of this work one is impressed with the numerous excellent illustrations; with the details of the writer's personal experience, and the care with which he has selected cases for operation. The neglect of this care has been the great cause for which operations on the middle ear have been decried.

In the brief space given for review one may only indicate the chief matters which attract attention. After 72 pages devoted to the anatomy and physiology of the ear, there are four colored plates and 18 wood-cuts, all *very* good. In Chapters III-IV, will be found Physical and Functional Examination. Chapters V-X are given to Diseases of the Auricle. Chapters XI-XVI to Diseases of the External Auditory Meatus, and Foreign Bodies in the Canal, including Exostoses, and Wounds and Injuries of the Membrana Tympani.

Chapters XVII-XXVI to Diseases of the Middle Ear. Instead of middle ear catarrh, the author used the term tubal catarrh, with synonyms of Anti-Salpingitis Eustachian Catarrh, borrowing a term from the gynecologists, but it has the same affection of the Eustachian tube which arises from acute coryza or naso-pharyngitis. Chapters XIX-XXVI to Acute Catarrhal Otitis Media and its complications. Now comes the most important and the best part of the book, the surgery of the Conducting Apparatus, which is most thorough and satisfactory in all the minutest details so necessary to the aural Surgeon. In the concluding chapters will be found Diseases of the Perceptive Mechanism, and Complicating Aural Affections. After a careful examination of the volume, we consider it not only the best work, but also the most practical text book in the English language. L. T.

INEBRITY OR NARCOMANIA. By Norman Kerr, M.D., F.L.S. Third edition, 8 vo., 780 pages. London. H. K. Lewis, publisher.

This book is not in any sense a religious work nor a fanatical sermon on drunkenness, but criticises from every scientific standpoint the misuse of all of the narcotics and of a large number of other drugs not usually placed in this class.

Anyone who has not made special investigation in this branch, will be surprised at the size of the list of drugs which are habitually used by individuals to produce stimulation, sleep, or a pleasant sensation of some sort.

The tendendcy to habitually use these drugs is regarded as a disease, and as such its etiology, pathology and treatment are discussed, and finally the part it plays in jurisprudence.

Having already reached its third edition this book has, of course, a recognized position, but besides being a very instructive medical work, this will prove a very interesting book for any student of human beings and of social conditions. S. M. W.

THE CARE AND FEEDING OF CHILDREN. A catechism for the use of Mothers and Children's nurses. By L. Emmett Holt, M.D., Professor of Diseases of Children in the N. Y. Polyclinic. Attending physician to the Babies' Hospital and the Nursery and Child's Hospital, New York. New York: D. Appleton & Co. 1894. Price, 50 cents.

This is a cloth-bound book of sixty-six pages, arranged in the form of question and answers, and originally intended for the instruction of nurses while in the training school. Some additions have been made, making it equally valuable to the trained nurse, the mother and, indeed, to the average general practitioner. The information is tersely expressed, and the teaching it offers is quite in harmony with the advanced notions of the specialist in children's diseases.

W. H. P.

THE PHYSICIAN'S VISITING LIST for 1895. Forty-fourth year of its publication. P. Blakiston & Co., 1012 Walnut St.

This visiting list—a familiar and valuable friend—comes before us again for 1895, being the forty-fourth year of its publication, which alone proves it has found sufficient favor with physicians. The same general arrangement has been maintained, and the fly-leaves contain many useful tables and data, which often serve one well in emergencies. W. H. P.

Neuralgia.

Dr. Thomas S. Lane, of Bronte, Tex., writes to the *Medical Brief*. that for twenty years he has used, with decided success:

Potassii nitratis	3iv
Aq camphoræ	3j

M. Sig.: One teaspoonful in a half-wineglass of water every fifteen minutes until relieved.

Pills for Chronic Bronchitis.

Ammonii chloridi	gr xv
Ammonii carbonatis	gr xv
Pulv ipecac	gr iii
Morph hydrochloratis	gr i
Mucilaginis acaciæ	q s

Divide into 10 pills, one to be taken night and morning.

—*Medical Press and Circular.*

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

MEDICAL PRESS.

Dr. Seymour Taylor writes on

Chlorosis.

This affection rarely shows itself in a woman who has borne children, and is most commonly seen in virgins from fourteen to twenty-five years old.

The symptoms are of course well known: pallor, breathlessness on exertion, dyspepsia, constipation, usually scanty menses, etc.

Physical examination usually shows venous humming, a marked systolic murmur in the pulmonary artery, marked tympanitic resonance in one or both flanks, but usually no organic disease of any kind.

Frequently the victims of this disorder are confined to a shop or workroom and therefore cannot take exercise, but occasionally they are the children of wealthy parents, and will then be found indisposed to any avoidable exertion. Constipation is probably present in every case, although unless closely questioned on this subject a patient will usually give misleading answers.

Chlorosis appears to be a severe neurosis which if neglected is apt to terminate in gastric ulcer. That the ulcer is not present at the outset in those cases in which it is found later is shown by the absence of hæmatemesis, although the other classical symptoms are usually to be found.

Subjects of chlorosis are usually found to have a craving for pickles, acids, unripe fruit, etc., and the use of these must be stopped in treatment.

The treatment which gives greatest satisfaction is purgation by any means preferred, but usually by Epsom salts, followed by the use of increasing doses of some of the alkaline iron preparations. Iron, when given without the preliminary purge, is useless.

The dyspepsia usually accompanying this disease is promptly relieved by alkalies, and a favorite combination is that of bicarbonate of soda, aromatic spirits of ammonia, dilute hydrocyanic acid and compound infusion of gentian.

JOURNAL OF NERVOUS AND MENTAL DISEASES.

Dr. R. K. Macalester reports

"A Case of Multiple Neuritis."

An Italian laborer, nineteen years old, had been unsuccessfully treated for rheumatism in the arms and legs for several weeks. When seen he complained of pains in the head, chest, legs and feet; had poor appetite, regular action of the bowels, no lesions of lungs or heart.

The patient could only stand and walk when supported, and then his gait was paretic and the feet were dragged. The eyes were normal, the extensors of the wrist and flexors of the feet were weak and somewhat atrophied, wrist and foot drop present and knee and elbow reflexes absent. The reaction of the extensors of the wrist and flexors of the ankles is feeble to the faradic current, (the only one tried.) An area of delayed sensation was found along the front of each leg. At four weeks after the onset the muscles reacted to a faradic current (though a relatively strong one) the prognosis was favorable and was subsequently confirmed.

The treatment adopted was a single dose of ten grains of calomel, $\frac{1}{32}$ grain strychnine sulphate *t.i.d.* raised subsequently to $\frac{1}{24}$ grain, massage, nourishing food, and the use of the faradic current.

Dr. Charles Henry Brown reports a case of

Infantile Amyotrophic Lateral Sclerosis of the Family Type.

The patient is a boy fifteen years of age, of German parentage, and about whose early history very little information is to be had.

The first symptoms were noticed three years ago and were inability to whistle and to talk plainly. The progress was so rapid that in a week the patient could not without effort move his tongue, whistle nor swallow. Soon there was inability to laugh or entirely close the eyes, and the least exertion caused difficult breathing. The hearing began to deteriorate. Then came inability to button or unbutton the clothes and rapid wasting of the muscles. Twitchings began to be felt in various muscles.

Plates from photographs show that there is lateral atrophy of the tongue and very little power over the organ. All the muscles of the throat and neck are much affected and the diaphragm appears to be also. Respiration is very greatly interfered with. Fibrillary twitchings, exaggerations of the reflexes and retraction of tendons completes the description.

The age and the fact that although the case grew worse until six months ago it then came to a standstill shows that this cannot class as a case of ordinary amyotrophic lateral sclerosis. In other respects the symptoms agree.

Dr. Charles K. Mills and J. W. McConnell report

A Case Indicating the Location of the Naming Centre in the Temporal Lobe.

The patient was a married woman forty years of age, who began to complain of numbness in the back of her neck, with vertigo and an excessive attack of vomiting lasting two days. For three years nothing peculiar was noted, but it was then seen that the patient was acting in an unusual manner. She had been a skilled dressmaker, but now

did inferior work, hung a printed certificate upside down, etc. She woke one morning complaining of hallucinations, acted strangely and toward night had a convulsion attended with unconsciousness. She was now confined to bed for a couple of weeks, seemed to age rapidly, had severe headaches and verbal amnesia. This suddenly increased with a couple of attacks of vertigo. Ophthalmoscopic examination showed the absence of optic neuritis, but there was left lateral homonomous hemianopsia.

There was word blindness without letter blindness. Right sided paralysis without anæsthesia appeared and progressed. Finally death occurred five years after the first symptoms. An autopsy showed a small nodular, partly disintegrated mass about the size of a hickory nut at about the posterior fourth of the third temporal convolution. The surface of the second, third and fourth temporal convolutions in their posterior half were granular and somewhat disintegrated.

A hard, yellowish-brown tumor was found in the temporal lobe mainly in the third and second temporal convolutions, almost entirely in the white matter of the third. Microscopically this was shown to be a glioma, and it almost certainly started in the third temporal convolution at the posterior extremity of the horizontal branch of the fissure of Sylvius.

Dr. F. Savary Pearce reports an

Unusual Case of Locomotor Ataxia.

The patient is a man of fifty-one years who has a good family history, but has had a good deal of care in nursing an invalid wife. About a month ago he rose from his desk apparently in good health, walked to his office door, had a sudden slight vertigo, and developed double vision which persisted.

The second day after this some numbness around the rectum, scrotum, and glans penis was noticed. A few days later weakness about the knees was complained of and a few nights later a sense of darkness before the eyes followed by a sense of heat and quivering about the nape of the neck with great rapidity of pulse heat. Then there began a jerking and quivering of the whole body, and the attack was repeated twice with less severity. Next morning he felt weak and walking on bricks gave the feeling of walking on a carpet, while walking on a carpet felt like soft pillows. This sensation persists. Slight numbness in the extremities developed The only approach to a crisis is an occasional twinge in the lypochondrium and in the calf of the leg.

Besides the sudden onset, and the absence of Argyll Robertson pupil this case is peculiar in that the wife of the man has posterior sclerosis of twenty years standing, which first appeared with diplopia which suddenly left her three months later and that it was one year after the onset in her case, before she had any symptoms of weakness in the legs.

The treatment used for this case is massage, bichloride of mercury, and injections of Brown Sequard's fluid. Some benefit seems to have resulted but the patient has been under the treatment a very short time only. Syphilis seems positively excluded in these cases.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

GYNECOLOGY.

Curative Effect of Baths in Diseases of Women.

Dr. F. H. Davenport (Boston *Med. and Surg Jour.*) says:

The treatment by baths plays an important part in gynecology, especially in the class of cases characterized by exudates of the pelvic peritoneum. What is ordinarily meant by the term exudate, may be divided into two parts: (1) the true serous, fibrinous or purulent collections in the pelvic structures; and (2) the peri- and para-metric connective-tissue bands and cicatrices, which must be regarded as the results of the other group. While the treatment of the first class of cases by balneotherapy shows most brilliant results, even an absolute *restitutio ad integrum*, in the case of adhesions and chronic thickenings the effect is merely symptomatic, reducing sensitiveness, relieving pain, and favoring general improvement.

According to Durhrssen (*Centralblatt fur Gynakologie*) these cicatrices do not in themselves cause pain, but favor the establishment of endometritis which is relieved by the baths. To be sure, the endometritis can be ordinarily more easily cured by curetting and cauterization, hence the latter measures should be tried before a course of baths.

Permanent results are not to be expected in cases of (1) retroflexion of the uterus with adhesions, (2) fixation of one or both ovaries by peri-oophoritic bands, (3) collections of pus in tubes or ovaries, as often occurs in connection with gonorrhœal infection. Appropriate treatment of the third class is laparotomy with removal of the diseased organs; of the first and second, forcible separation of the uterine and ovarian adhesions, and consequent increased mobility of the organs under anæsthesia. The movable uterus is then replaced, and (according to Schultze) held by a pessary. Duhrssen, on the contrary, prefers vaginal fixation, and later massage, as advised by Chrobak. The mobility of the

ovary should be maintained by massage after the method of Thure-Brandt.

It is therefore essential, in order to select appropriate cases for treatment by baths, in the first place to establish a correct diagnosis.

The Treatment of Endometritis.

Dr. C. C. Frederick (*American Journal of Obstetrics*), says:

The treatment of inflammation of the uterine mucous membrane is as important as its prevention, and much more difficult. Intra-uterine medication as ordinarily practiced in the physician's office is useless; more frequently it is positively harmful. It is the experience of every gynecologist that many of the cases which come to him with pelvic inflammation give a history of painful intra-uterine medication at their physicians' office extending over a period of months, perhaps, the patient's condition meanwhile steadily getting worse. The dirty uterine sound and intra-uterine medication have caused more serious disease in women than the conditions for which the treatment was given would ever have produced.

In the treatment of these cases we should not forget constitutional conditions which may cause some of the symptoms which we are apt to ascribe to local disease. Tonic treatment will do much for these. I have seen several malarial subjects with profuse uterine catarrh entirely cured by anti-malarial treatment.

True endometritis is best treated by thoroughly dilating the cervical canal, removing the diseased membrane with the sharp curette, and thoroughly disinfecting the cavity, which may then be packed with fodoform gauze to insure good drainage. In spite of all that has been written against dilating the cervix and uterine cavity, provided there be no extensive disease of the uterine appendages the operation is as safe as any in gynecology, if done with thorough antiseptic precautions, with thoroughly disinfected tents. A laminaria or tupelo tent can be rendered aseptic. Endometritis cannot be treated successfully in any of its forms without good dilatation of the cervix as a primary step.

Prevent puerperal infection by practicing antiseptic midwifery; discourage attempted abortions on the part of your patients; have your patients' lacerated cervices and perinei repaired before they lead to diseased conditions; build up your female patients' general health; do very little or no intra uterine medication; cure their endometritis, whether due to gonorrhœa or other causes; correct displacements, if there be no chronic tubal or ovarian trouble or adhesions—and you will prevent much of the pelvic disease for which hundreds of capital operations are done every week.

'Laparotomy for Pelvic Disease. Why Continue it?

The teachings of Lawson Tait in the field of abdominal surgery for disease of the female appendages have, like all improvements of great merit in modern times, been followed by a great deal of good, and at the same time a great deal of evil has followed in the wake of his followers. The adoption of his methods has brought relief to thousands, death to hundreds and the exchange of one misery for another in scores of others. Tait raised modern gynecology to a high plane, but now after more than a decade observation we ought to advance still higher and accomplish more for women than has yet been achieved. Laparotomy for pelvic disease is being done less often now than formerly, the newer procedure being to attack the disease through the vagina, as advocated by Pean in 1891. Other operators have continued the work, and we can no longer resort to laparotomy for pelvic diseases and tumors occupying the pelvic or even the lower abdominal segment. The writer agrees with Jacobs that 85 per cent. of women requiring removal of the appendages have been infected with gonorrhœa, and advocates the total ablation of uterus and appendages when any operation is attempted, claiming that as the disease has infected the uterus it would be worse than useless to remove the appendages and leave the uterus as a source of subsequent infection.

Laparotomy was frequently followed by hernias, fæcal fistulas, returning sutures, etc, But Jocobs states that in not a case of recovery from total extirpation is there a troublesome sequela. Cases amenable to operation through the vagina are fibroids of medium size, small ovarian cysts, large ovarian cysts without adhesions, parovarian cysts. These may be operated upon with or without total extirpation of the uterus. The writer strongly condemns leaving ligatures imbedded in infected tissues which are bound to communicate the infection to the peritoneal cavity, and leaving the infected stumps of infected tubes. He thinks the time has come when the universal custom of opening a women's abdomen by laparotomy for every ailment of her pelvic basin should be abandoned.

In 140 cases of total extirpation by vagina, Jacobs had a mortality of 1.4 per cent. Tait states that a mortality of 3 per cent. is allowable in laparotomy for removal of the appendages. The average time a patient is confined to her bed after a total extirpation is about eight or nine days, while after a laparotomy it is about twenty-one days.—*R. Stanbury Sutton, M.D., N. Y. Med. Jour.*

For Removal of Warts

R. B. Morrison:

Hydrarg bichlor	grs. v.
Acid salicyl	5i.
Collodion	5i.

M.—Apply once a day, removing the crust each time before a fresh application is made. If necessary the mercuric chloride may be increased to 30 grains in the same amount of collodion.

Four applications are usually sufficient for removal by gentle traction; after which dress with simple ointment, as may be necessary.

PHYSIOLOGY.

Physioloy of Intestinal Peristalsis.

Dr. P. Grutzner (*Deutsch. Med. Wochnschrift*), has demonstrated that although as a rule fluids introduced into the rectnm are at once absorbed, in some cases, however, he observed that colored fluids introduced into the rectum of animals could be detected some hours later in other portions of the alimentary canal and especially in the stomach. This led him to a series of experiments, and employing small solid particles he found that they would be transported to the stomach after introduction into the rectum. He observed that if a small quantity of a mixture composed of equal parts of powdered animal charcoal and 0.6 per cent. salt solution were injected into the rectum of an animal, which had been allowed to fast for twenty-four hours before the introduction of the mixture, after the lapse of about four to six hours, the animal being killed, small quantities of the charcoal were present in various parts of the intestine, but particularly in the stomach. In carrying out a similar series of experiments upon the human subject, using starch and table salt for these purposes, G. found that after some hours the starch could be detected present in the contents of the stomach.

The cause of this antiperistaltic movement G. ascribes to the chemical consistency of the fluid with which the particles are mixed, this upward movement invariably taking place when the substances were mixed with a weak solution of table salt, but never when suspended in plain water or other solutions. The table salt seems to act directly upon the mucous membrane of the rectum and occasions this "upward movement," or antiperistalsis. The upward movements take place in spite of the large masses of fæcal matter driven downward, but are confined, however, only to the peripheral portions of the intestinal tract.

Easy and Physiological Method of Keeping Warm.

It simply consists in taking deep inspirations.

The physiological modus operandi, whereby warmth can be afforded to our body when cold by drawing deep, forcible inspirations, taking care, moreover, to hold the air as long as possible before expelling it, is simplicity itself. Muscular action being then directly induced, that of the lungs ensues, alternate pulmonary contraction and expansion obviously acting on the general circulation as a pair of bellows on a sluggish fire, while, moreover, the act of inspiration must necessarily take in more oxygen from the outer atmosphere, and it will again be recalled here that the more thoroughly the blood is oxygenated the more internal heat will be generated thereby.

The author states: "So simple an expedient can be very readily put in practice by any one, and those to whom I have recommended its trial unanimously have described the same results as I have myself experienced when doing so on an exceptionally bitter cold day. Not many exhalations were in any of these cases needed to be taken before a gradual sense of growing warmth, of correspondingly decreasing discomfort, began to assert its presence throughout the person; the internal spasmodic shivering too often felt beneath the protection of the thickest greatcoats gradually faded out of sensation; the ears and nose, but a few minutes previously asserting their retained existence by an almost sore numbness, in their turn would then become comfortably warm after their normal fashion; then, finally, hands and feet which had previously seemed destined to proclaim shoes and gloves as utterly devoid of any protective utility whatsoever, in their turn become permeated with the same satisfactory sense of restored habitual condition of sensibility and warmth."– *T. Brindley James, F. R. C. P.* (*Med. Times & Gaz.*)

ARMY AND NAVY.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE FIFTEEN DAYS ENDING FEBRUARY 23, 1895.

Captain Henry P. Birmingham, Assistant Surgeon is relieved from duty at Fort Grant, Arizona Territory, and ordered to Fort Trumbull, Conn., for duty relieving Captian Freeman V. Walker, Assistant Surgeon.

Captain Walker on being thus relieved will proceed to Fort Grant, Arizona, and report for duty at that post.

The extension of leave of absence granted 1st Lieutenant Henry C. Fisher, Assistant Surgeon, is further extended one month.

THE
MEDICAL AND SURGICAL
REPORTER.

No. 1984. MARCH 16, 1895. Vol. LXXII—No. 11

ORIGINAL ARTICLES.

OPERATIVE PROCEDURE FOR THE RELIEF OF PROFOUND DEAFNESS, LOUD SUBJECTIVE NOISES AND VERTIGO.

LAURENCE TURNBULL, M.D., Ph.G., PHILADELPHIA, PA.

In cases of profound deafness with loud subjective noises, not relieved by ordinary methods and accompanied by severe vertigo, one must resort to some operative procedure for relief. We will briefly enumerate the various operations which have been proposed and performed prior to the radical operations of excision of the entire membrana tympani, or of the ossicles, or both, and which in our hands, as also in those others have given the most satisfactory results.

PARACENTESIS OF THE MEMBRANA TYMPANI AND MYRINGODECTOMY.

The operation of puncturing the membrana tympani has been employed since the time of Sir Astley Cooper and is still resorted to for relieving an effusion of serum, pus and blood; also to improve or to reduce a thickened membrana tympani. At one time it was highly lauded and again much neglected; was revived by Bonnafont and others, but never founded upon a true and pathological basis.

The relaxation of the membrana tympani accompanied with thinning of its substance, is a very frequent effect of the protracted presence of mucus within the tympanum, and when mucus is present within the tympanum, the membrane is depressed, at least in parts, rather than protruded outwards. After paracentesis or perforation, it is well to wash out the tympanum with a warm, weak solution of bicarbonate of soda or of chlorate of potash (gr. v to the ounce) which is syringed freely through the perforation. This is done by means of the Eustachian catheter, but in the opposite direction by applying the syringe to the meatus, the nozzle being well covered with elastic tubing so as to fit closely without causing pain. The stream, with care, may be sent up with considerable force provided the Eustachian tube be open, and it will escape by the nostril, the head, of course, being bent forward. This cleansing should be repeated every second or third day until all appearance of an accumulation has ceased. Then a solution of sulphate of zinc (grs. ij–x. ad f. ℥i of water) may be substituted and used in the same way.

When the membrane is incised we often find a yellow viscid matter which should be washed out. In chronic cases it is well to syringe into the tympanum with a solution of the nitrate of silver (grs. ij. v. ad f. ℥j) and then perform inflation.

The author has resorted to this operation in chronic cases of catarrh of the

tympanum, in several instances with more or less success. When it is desirable to make a simple puncture, the instrument Fig. A was employed; but if a portion of the membrana tympani was to be removed

FIG. A.

by excision of a piece of the membrane, or *myringodectomy* with or without cauterization or a large incision made, he used the sickle-shaped myringatome, The operation, in some instances, is attended with considerable pain; to allay this, and the nervous feeling attending the dread of the operation, it is well to employ a 10

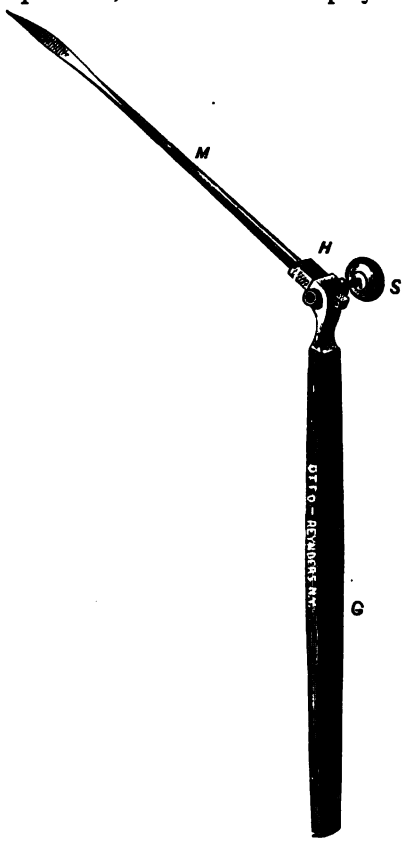

FIG. B.—HARTMANN'S TENOTOME.

Filled in a very convenient handle, it is curved at M and filled in the joint H, while there is a screw at S, so as to hold it firm. Several other instruments can be used in this handle.

grain solution of cocaine. Cauterization of the membrana tympani by the galvano cautery or with concentrated sulphuric acid as recommended by Simcock of New York, only applying one small drop on the point of a glass probe, all the surrounding parts protected.

ACCUMULATION OF SERUM IN THE TYMPANIC CAVITY.

In the valuable monagraph of Politzer on "The Membrana Tympani in Health and Disease," the translators have added a supplement from him of the diagnosis and treatment of the accumulation of fluid resembling serum in the tympanic cavity but not involving the transparency of the membrana tympani; that is it admits light enough into the cavity so that this fluid can be seen, being of a dark gray color on the membrana tympani. The boundary between the parts is marked by a fine black line, having the appearance of a black hair lying upon the membrane. By causing the patient to lie down, the black line changes its position, showing it to be fluid. When the air is forced through the Eustachian tube by Politzer's method and the membrana tympani inspected, the following changes occurred: the lateral portions of the membrane bulged out, and, instead of the distinct limitation in the colors before described, the whole field is covered with rings (or air bubbles in the fluid), of various sizes, having dark contours. The other symptoms were deafness and pressure in the head with loud ringing.

The treatment in the majority of these cases consisted in the employment of his method for inflating the middle-ear, with the head bent over to the opposite side and somewhat forward. In the cases in which the membrane was much shrunken and presented a dark greenish-yellow color, Dr. Politzer, after using the air douche with only temporary success, performed paracentesis and immediately afterwards forced air through the ear by his method, thus driving the matter out into the external meatus.

SECTION OF THE POSTERIOR FOLD OF THE MEMBRANA TYMPANI.

In a small number of these cases has there been permanent improvement. It was first recommended by Politzer in 1871, and a year later by Lucae. His mode of operating is as follows: For section of the posterior fold of the membrana tympani he used a small knife, rounded at its point, sharp-edged, with the blade fixed at an angle to its handle, or else the lancet.

The section is made perpendicular to the longitudinal direction of the fold from above downwards, and the most favorable place for incision is midway between the short process and the peripheral extremity of the fold. The division of the fold is generally accompanied by a grating noise, the margins of the wound recede from one another and the handle of the malleus, which was moved inwards, assumes a more perpendicular position. The bleeding after the operation is generally trifling. Sometimes it is considerable on severing the vascular bundle which extends from the membrana tympani to the upper wall of the meatus, but it can soon be arrested by applying a small plug of absorbent cotton to the incision. This application is also advisable when there is only slight bleeding, to prevent the membrana tympani from being clogged with a crust of blood. Sometimes the blood flows from the wound inwards towards the tympanic cavity, in which case the improvement is observable only after its absorption.

TENOTOMY OF THE TENDON OF THE TENSOR-TYMPANI AND STAPEDIUS MUSCLES.

Improvement in the hearing has at times followed these operations, but now and then there is a decrease of the subjective noises after the operation.

Division of the tendon of the tensor tympani was proposed by Hyrtl in his "Topographische Anatomie," 1847, and was first performed in the living ear by Weber-Liel, in 1868.

The most important objective signs of shortening of this tendon are held to be great inward curvature of the membrana tympani; foreshortening of the handle of the malleus; great projection of the short process and of the posterior fold; and also such a state of the membrane as is often found when the Eustachian tube is impermeable.

The instrument for dividing the tendon of the tensor-tympani is introduced into the tympanic cavity in front of the handle of the malleus by some specialists (Weber-Liel), behind it by others (Voltolini, Schwartze, Hartmann). The latter situation is, according to Politzer, by far the safer and gives the operation a better chance of success.

The tenotome of Hartmann is generally preferred, which consists of a small knife curved on the flat and on the edge, the point of which reaches about 1 mm. farther outwards than its upper edge. This has proved the most serviceable instrument of all, as with it the operation is performed most safely and without any injury to other parts.

To form an accurate estimate of the success of the operation, it is advisable, as was insisted on by Hartmann, first to make an incision into the posterior segment of the membrana tympani about 1 mm. behind the handle of the malleus, and then to ascertain what change occurs in the hearing distance and in the subjective noises. Then Hartmann's tenotome is introduced through the incision into the tympanic cavity for a distance of about 3 mm., whereby the instrument is placed below the tendon of the tensor-tympani between the handle of the malleus and the long crus of the incus. By slightly sinking its handle the sharp point of the tenotome is forced so far towards the upper part of the tympanic cavity that the tendon is obliquely divided when the instrument is withdrawn.

The division of the tendon is often accompanied by a peculiar grating noise, and sometimes a considerable effusion of blood into the tympanic cavity is observed after the instrument has been removed. This is absorbed after a few weeks.

MOBILIZATION AND EXTRACTION OF THE STAPES.

This operation is indicated in very dry middle-ear catarrh, where the function of the auditory nerve is intact and speech may be quite distinctly heard, and to be effective the adhesions must be torn. Simply stretching and pulling them is

very apt to cause shrinking and retraction.

Mobilization of the stapes is believed to give more frequent and more satisfactory results, judging from the first thirty-five cases in which Bucheron has performed the operation. He holds the procedure to be without danger, and comparable on the one hand to the operation for glaucoma—in relieving the pressure on the nerve, and the other hand to that for cataract—in removing an injurious mechanism.

No accident occurred in the thirty-five cases mentioned, except some insignificant cases of otorrhœa, and that in some the chorda tympani was divided with the result of temporary loss of taste in the corresponding half of the tongue.

As a rule the hearing power for ordinary conversation was doubled or trebled. When the deafness was of moderate intensity and duration, there was a very marked amelioration in two-thirds of the cases, and the improvement was immediate.

Boucheron cites two cases as examples, and gives the following indications for the operation if the function of the auditory nerve be unaffected:

1. Certain cases of progressive hereditary deafness, with intermittent obstruction of the Eustachian tube and sclerosing contraction of the ligaments of the ossicles.
2. Certain cases of deafness with vertigo and humming tinnitus (Meniere's symptoms).
3. Certain cases of infantile deafness to mutism.
4. Certain cases of progressive senile deafness.
5. Certain cases of paracusis Willisii.

Extraction of the stapes is an operation which is still under trial, and although very brilliant results have been reported, later observations do not confirm.

SYNECHOTOMY OF THE CRURA OF THE STAPES.

According to Politzer, this operation is only applicable in those cases in which the objective examination gives a marked negation (Rinne), and lengthened duration of perception for the C^2 tuning-fork through the cranial bones, as well as intact tone perception for the acoumeter. Besides, the mobility of the malleus should be proved by means of Siegel's speculum. This operation has been performed in 18 cases. In four of these cases, in which the deafness was of such a high degree that spoken words could be heard only in the immediate neighborhood of the ear, the stapes proved to be anchylosed and the result was *nil.* Of the other fourteen cases, in only five was there marked and permanent improvement in hearing, as the hearing distance increased from 1 to 1½ m.m to 4, to 7.11 m.m. and accompanying subjective noises were decreased. In the other nine cases, the improvement in hearing after the operation was of a slight degree and was transient. The operation is worthy of further trial in properly selected cases.

EXCISION OF THE ENTIRE MEMBRANA TYMPANI AND THE EXTRACTION MALLEUS AND INCUS.

Simrock, of New York, was one of the first who made the experiment of removing the cause of deafness in chronic thickening of the membrana tympani in middle-ear catarrh with adhesions or a partial anchylosis of one or more ossicles. After the operation he found that a membranous cicatrix formed over it, filling the whole cavity and adhering to the inner wall of the tympanic cavity. Kessel advised also the removal of the cartilaginous ring on the posterior circumference of the membrane, so as to obtain a more permanent opening. Schwartze considered it dependent upon the presence of the cartilage at the limbus. It was Dr. Sexton, of New York, who brought the operation fully before the aural surgeons of the world and advocated the operation.

The improvement, as observed by all successful operators, depends upon the stapes, for if this bone is fixed sound conduction is imperfect. This is of the utmost importance to determine before the operation, and this, with other sources of failure, is what has been dwelt upon so much. No reference will be made to the operation of the removal of the whole or of part of the diseased tissue or bones following otitis-media purulenta chronica. This and the consideration of Stacks radical operation for obstinate chronic otorrhœa will be reserved for another paper, having had full opportunity for the study of both classes, and having per-

formed both operations in private and publicly in the clinic with my colleague, Dr. J. MacCuen Smith, in the Ear Department of the Jefferson Medical College Hospital.

A REPORT OF CASES NOT SUITABLE FOR OPERATION AND ILLUSTRATIVE OF THE ABOVE OBSERVATIONS.

CASE I.—*Paralysis of Auditory Nerve.* Martha A., aged forty-nine, living in Chester, Pa., has suffered from deafness for many years, the result of a chronic catarrhal inflammation. Voice not heard unless words were shouted into the ear by a familiar voice, and even then many were not understood, so that she was obliged to resort to writing. No form of ear trumpet improved her condition. The tuning fork was neither heard in the air nor on bones of the head as a musical note. No operation could be performed in this case.

CASE II.—Miss Mary H. C., aged thirty-four; chalky deposit between all the bones with fixation of the stapes. The subject belonged to a gouty family, and was so deaf as only to hear the voice when loudly spoken near the ear and the speaker was looking at her; general conversation not heard. Tuning fork heard when placed over the bones of the head, and in the air when held close to auditory meatus. There was also a family history of deafness. The lady was very desirous of having the operation performed, although no positive opinion of a favorable result was offered. She had been under the care of several competent aurists, but with no permanent good results. Unfortunately, the "Bing" test was not employed. The operation was performed by a friend and a chalky condition was found, only the membrana tympani and malleus could be removed in a broken condition, incus not found. The operation produced a very slight improvement, but with few chances of permanent result. The stapes remained intact, but was more or less involved in the deposit.

CASE III.—Diphtheria; the deafness involving the auditory nerve, etc. R. E. C., aged thirty-six. Deafness in both ears of many years duration, so deaf as to require being spoken to in a very loud tone and close to the auricle.

History: Had a severe attack of diphtheria when a girl, which involved every part of the ears, nose and throat, and her life was despaired of. She recovered her voice and her throat became so she could swallow, but her hearing gradually became more and more impaired, leaving her with sclerosis and atrophic neuritis. In spite of careful treatment of a local and general character, she was unable to hear her own watch in her right ear, and neither voice nor watch in her left. The membrana tympani was very much depressed and filled with cicatricial tissue, and no outline of ossicles could be seen with a bright electric light. Being in despair about her ears, she was recommended to a medical gentleman of this city, who gave her the encouragement that by an operation she would be improved. She was ready "to catch at a straw," especially as the physician told her of successful cases upon whom he had operated. Under an anesthetic, he removed first, the entire membrana tympani and malleus, then the incus, and lastly elevated the oval window to release foot-plate of the stapes. There was unfortunately, not the slightest improvement. Now, this was a case where no operative interference was justifiable except for the relief of a discharge. For several reasons: First, the very profound deafness; second, the deafness being a sequel of diphtheria. This destructive disease not only produces outward changes in the nostrils and throat but almost always involves the tubal muscles with paralysis, followed even by disease of the labyrinth.

THE PROPER CLASS OF CASES TO BE OPERATED UPON—THE PROPER METHOD OF OPERATING, AND THE RESULT OF THE OPERATION UP TO THIS TIME.

Healthy family history, of which we have already spoken; no hereditary tendency to deafness; ability to hear the voice as speech, even when spoken close to the ear; no ozena or atrophic rhinitis; ability to hear the voice through the hearing trumpet or according to the "Bing" method, as speech.

It is an absolute rule first to be certain that the auditory nerve is not organically diseased but only functionally involved, by careful testing. For if a patient is unable to hear the combinations of letters and words in speech loudly spoken in the

ear, the case is not a suitable subject for operation. If the patient is unable to hear the lingual R, it is often an indication of defects of the membrana tympani. Care should be taken that the mouth is not seen nor the lips read when making these examinations.

Still another test is by means of the speaking tube or trumpet, for "if speech is not heard through sound conduction by means of the ossicles, hearing does not exist" (Politzer). Each ear should be examined separately, and the testing performed as follows: The patient stands opposite the physician, facing him and with his eyes directed downward to the flood. The patient is tested first by means of the self-sounding consonants alone, R lingual, B, K, T, F, S, Sch, G soft, as well as the very deeply whispered U. Being unable to hear the F sounds occurs oftenest in labyrinth disease, according to Wolf. Politzer holds that his method of testing the hearing distance for speech, before and after treatment, is the most important, as it gives the surest judgment of the amount of and the improvement in hearing. It is also necessary to determine whether or no there is anchylosis of the stapes, for the malleus and incus may be removed without the slightest relief to the deafness as the stapes is fixed in the bone (oval window).

Dr. Bing, of Vienna, has by this method, been able to assist us in making a diagnosis concerning the variety of deafness before operating. He calls it the "entotic" use of the speaking tube—speaking into the funnel of a speaking tube while in position, the other end of which is directly connected with the cavity of the tympanum by means of fitting into a catheter introduced in the Eustachian tube. By this means the waves of sound pass through the speaking tube, catheter and Eustachian tube into the cavum tympani; they reach the foot-plate of the stapes and the fenestra ovalis, and by them communicate to the fluid of the labyrinth and auditory nerve.

According to Politzer, in a case where speech is not heard through a speaking tube in the external meatus by the "entotic" method, there is a hindrance to sound conduction in the malleus or incus and the foot-plate of the stapes is not freely movable in the fenestra ovalis.

In another article we will give the proper method of operating, and some of the collected results of the operation.

GUNSHOT WOUNDS.*

GEO. R. DEAN, M.D., SPARTANBURG, S. C.

The literature of gunshot wounds in private practice is very meagre, and he who depends upon it for guidance in emergencies will be greatly disappointed.

The safest and only fixed rule here, is a sound surgical knowledge, based upon known truths of pathology, and brightened by a cultivated and continuous study of the latest developments in surgical proceedings. For there can be no absolute ironclad rules laid down from which, in such cases, one can choose that which is suitable to his own use, but must depend upon his own surgical skill and knowledge to adapt his treatment to the case in hand.

In the South, where gunshot wounds are prevalent as a mode of personal injury, we ought to have more knowledge of the history, treatment and results of such injuries than we now possess.

But to my surprise, I find the data even here very scant. I do not propose in this paper to seek out and record the cases reported and the results obtained by others, but will try to interest this Association with some cases, and will deduce some facts from them that may hereafter be of service to others.

GUNSHOT WOUNDS OF THE ANKLE JOINT.

CASE I, of A.—A lad of fourteen years, while toying with a pistol, accidentally discharged it, the ball entering two inches above the internal malleolus of the right leg, passing down and outward, pene-

* Read by title before the South Carolina State Association, 1894.

trated the lower end of the tibia, and on through the ankle joint and into the os calcis, or into the articulation between it and the tibia, and lodged somewhere in that vincinty.

It was a 38-calibre, Smith & Wesson pistol, and of great penetrating power. It passed through about two inches of bone in all. I saw him about two hours later, gave ether, and tried to find the ball, as I thought it would probably disable the boy if left where it lodged. I could find nothing but pieces of shattered bone. I washed out the wound with bichloride 1:2000, and sent him home, promising nothing as to prognosis.

The next day, temperature 100°, otherwise doing well; kept up the bichloride wash twice a day, temperature rising gradually for several days, never, however, rising above 102°; usually rested well, with phenacetine at night. In six days suppuration had set in, much to my regret.

This kept up for several days, when I discovered a flushed and tender spot below the internal malleolus. This I afterwards opened, and it discharged freely. I now gave up all hope of saving the joint as a useful appendage. Four days after this another abscess came on the malleolus, and broke before I saw it. Now the cause for the suppuration I had labored so hard to prevent was made manifest. Something dark appearing in the opening, I picked it up with forcep, and extracted a piece of woolen sock carried in with the ball. This was repeated from day to day until all was out. After this all the places, together with the wound of entrance, healed up kindly, and the boy soon took up his crutches, and at this time, four months since the accident, walks half a mile to school, with a slight deformity in his gait, and with a moderate degree of impairment of the usefulness of the joint itself.

Since this was written the ball appeared just under the skin, to the right of Tendo Achilles, above the os calcis, and was cut out by the father of the boy. The lameness is greatly improved.

GUNSHOT WOUND IN THE KNEE-JOINT.

The second case appeared in the practice of my friend, Dr. H. A constable fired a No. 38 ball, from a Smith & Wesson pistol, into a fleeing prisoner, the ball entering from behind, in the popliteal region, passed around or through the knee-joint, and when he was seen by Dr. H. the ball could be felt in front, near the patella. He was kept quiet with an antiseptic dressing over the wound, and a splint and roller over the leg and thigh for several weeks. The splint was removed and the leg left free, only he was not allowed to move it about. We saw him together frequently, and found the ball floating about in the accumulation of fluid that had gathered and could be pushed from front to rear around the joint, or through it and under the patella. In fact it seemed to be a privileged character in the joint, going when and where and how it pleased. After consultation, some days afterward, we decided to open the joint and extract the ball. This we did by pushing it down to its lowest descent, gathering it between the fingers, incising the skin upon it, and sewing it up, dressing antiseptically and placing the leg again at rest. It healed kindly and the man made a perfect recovery, with perfect use of the limb.

CASE III. J. B.—A constable in attempting to arrest a man became engaged in a fight in which the man was killed and J. B. desperately wounded.

The wound was made with shot about No. 4, and was fired from left and rear and not very far distant. The load entered the back four and a half inches to the right of the spinal column, and over the region of the eleventh and twelfth ribs. After being shot he walked half a mile to the county jail, and from there was conveyed to his boarding-house, half a mile distant. I was called at once to see him, but being absent Dr. L. K. Blake saw him for me and was engaged with me in the case until convalescence. B. is a man of powerful physique, over six feet high, weighing two hundred and forty pounds, aged forty, a man inured to labor and hardships, a carpenter by trade. When wounded he was on the state constable force in the discharge of his duty. When first seen by Dr. Blake, one hour after being wounded, there was much pain in the region of the liver and lower portion of right lung. Morphine and whiskey was given, wound dressed and he was made comfortable. I saw him at three o'clock the following morning

and found the following conditions: Wound as above described. The load seemed to have entered at an angle of about 30°. There was one central ragged wound large enough to admit the ends of three fingers and around this numerous shot holes, variously grouped, some ranging deeply into the tissues, others following the direction of the ribs just beneath the outer surface. The appearance of the outer wound seemed as if most of the shot had taken the latter direction. We did but little probing, as we did not wish to add to the traumatism already existing. After consultation with Drs. Heinitsh and Blake it was decided to treat his case expectantly, as it was believed that the liver and colon were seriously damaged. The pain in the liver and difficult breathing, together with the location of the wound, and the great thickness of the abdominal wall led us to this decision, believing that in a few days he would probably die, and that operative interference would only hasten the end. So from day to day we watched him, and thought we could see the end approaching closer and closer. Of the ten physicians who saw him about this time all said he would die. We will now take up his history during this trying period and see what was the outcome.

NOTES ON BLAYTON'S WOUNDS.

December 27th, 9 P.M.—Some shock and chill, great restlessness and pain over right lung, in front about the sixth and eighth rib, pulse 76.

December 28th 3 A.M.—Pulse 96, resting quietly under morphine.

9 A.M.—Temperature 100°, pulse 100.

4 P.M.—Temperature 102°, pulse 106, vomited.

9 P.M.—Temperature 100°, pulse 106, vomited freely.

December 29th, 8 A.M.—Pulse 106, intermittent and very irregular, vomiting continuously, countenance anxious, temperature 98; bowels moved to day.

4 P.M.—Pulse 120, temperature normal, vomits only when taking whiskey; retains milk well.

8.30 P.M.—Temperature 100 2-5°, pulse 108, conditions somewhat better.

December 30th.—Pulse 104, temperature 99°, no vomiting, retains milk well.

2 P.M.—Pulse 100 and good temperature, 97½°. Gave morphine, rested comfortably except for great distention of abdomen.

6 P.M.—Temperature 97 2-5°, pulse 164, sank rapidly to 180 in half an hour; gave nitro-glycerine and digitalis; Cheyenstokes respiration.

8.30 P.M.—Temperature 97 2-5°, pulse 180, weaker, strychnia and morphine.

9.30 P. M.—Pulse 132, temperature 99 3-10°.

December 31st, 3 A.M.—Pulse 120, temperature 97½°. 7 A.M.—pulse 168, temperature 97 4-5°. Gave strychnine 1-20 gr., morphia ½. Great abdominal distension. 10 A.M.—pulse 160. 10.30 A.M.—pulse 168. Gave strychnine $\frac{1}{10}$ of gr. 2.45 P.M.—pulse 118; complaims of pain; strychnine and morphine. 3.35 P.M.—pulse 180. At 5.45 P.M.—pulse 200; gave strychnine, 1-30th of a grain. At 6 P.M.—pulse 188, temperature 97½°; his condition extremely unpromising and death expected every hour. At 9.45 P.M.—pulse 180, temperature 97 2-5; nitro glycerine, strychnine and morphine, great abdominal distention, heart irregular, and varying as much as 60 to 80 beats to the minute within space of half hour; first signs of mental abberation; retains milk and soft boiled egg. 12 P. M.—pulse 200, feet and legs cold to the knees, sleeping well. January 1, 1891, 1 in the morning—pulse 180, strch. and morph. 3 in the morning—pulse 160, temperature 89°. 9 A. M.—pulse 176. At 8 this morning a sloughing of the wound opened into the cavity, exhaling therefrom a fecal odor, mixed with other foul gases, discharged a large amount of blood, serum and pus. 10.30—pulse 172, a free discharge from wound. 4 P. M.—pulse 160, wound discharging freely.

January 2d, 7 in the morning—pulse 108. 11 A. M.—pulse from 60 to 100, temperature 98°; wound discharging less, condition improved. 3 P. M.—pulse 120, chill, temperature 99½°, restless and anxious, morphine. 9 P. M.—pulse 120, resting under morph., bowels moved with anema. January 3d, 8.30 in the morning—pulse 142, wound discharging more freely, decided fecal odor, bowels moved first time voluntarily. 10.30—wound dressed, followed by chill, with great restlessness and anxiety.

12.30 P. M.—pulse 212, pupils dilated, active delirium gave half grain morphine. (Suspected here an overdose of atropia

given by the nurse by mistake). 5 P. M. —pulse unsteady at 80, two beats with intervals, breathing 20 and labored.

January 14th, 8 in the morning, rested well last night, two stools during the night, pulse 72, temperature normal. 9 in the morning, pulse 72, temperature normal, less discharge from wound, conditions better. 9.30 P. M.—passed a good day, bowels soft and free from pain, temperature normal.

January 5th. Memoranda lost, but nothing unusual to-day.

January 6th. 9 A.M.—pulse 90 and good, slight cough, compound spirits ammonia prescribed, two stools, cheerful and bright. 8 P. M.—About the same, slight static pneumonia, discharge from wound less offensive, wants to eat, sat propped up in bed, large fecal discharge to-day, consistent, marked on one side with bloody mucous.

January 7th. Condition fairly good.

January 8th. Condition same, profuse sweat the night before.

January 9th. Condition same, removed paper wadding and necrossed tissue.

January 10th. About the same, a portion of two ribs exposed to view devoid of periostium.

January 11th. Wound discharging very freely. 7. P. M.—Temperature 100°, pulse 108, seems not so well.

January 12th. 9 A. M.—Rested badly, temperature and pulse improved, sweated freely. 8 P. M.—Sweating during the day, no fecal odor from wound, temperature and pulse good, sloughing about over, with strong light can see into the abdominal cavity, wound looks better.

January 13th, 9 o'clock in the morning, looks and feels well, can see large intestine through opening in abdominal wall, can detect one shot hole in the colon. 6 P. M.—Pulse 108, temperature 101°, restless and anxious, gave strychnine.

January 14th. Pulse 124, temperature 102⅘°, at 9 o'clock in the morning, bad night, no sleep, no appetite, small hole apparently in mæso colon, discharging pus. 11 in morning recalled to patient, temperature 103⅘°, pulse 144, chill at 10.30, rochelle salts and strychnine.

January 15th. 9 in morning, condition improved. 1.30 P. M.—Temperature 101°, pulse 108, seems better, enema of warm water passed out readily through the wound, morphine and strychnine. 6.30 P. M.—Temperature 101°, pulse 100, copious discharge from bowel. 9.30 P. M. —Sleeping soundly and breathing quietly.

January 16th, 17th, 18th and 19th. A gradual improvement, wound filling up slowly. 20th and 21st.—Periosteum beginning to cover exposed ribs, photographed wound to-day, temperature and pulse normal. From this time on improvement was gradual, but progressive, and on the fifty-first day he was discharged.

In the above notes only the more salient points of the treatment have been given, as a minute detail would become tedious. Each symptom was met as it appeared, and treated as indications demanded, keeping ever in view the fact that no set rules, but sound, surgical knowledge should be our guide in such conditions.

This was a more fortunate termination than could at any time during the first ten days have been hoped for. The man, first of all, had an iron constitution, capaable of great resistance to depression, and he had hope even in his darkest hour, of ultimate recovery. The turning point, however, upon which his recovery hinged, was reached upon the day when his wound had sloughed sufficiently to permit discharges to pass through.

His condition from this time improved, and although relapses occurred, they were only temporary and soon passed away. This, then, brings me to a point the gist of which is drainage.

I was not misled in this case, however. We had talked of this and had discussed the propriety of opening the abdomen early, but believing the traumatism to liver, bowels, etc., to be so great that any interference would hasten dissolution, we preferred to wait. Had the wound been in the abdomen, away from the ribs, and out of probable reach of the liver, I should have urged the opening of the abdomen the first day, draining, if nothing else. True, this man recovered without surgical interference; nevertheless I think in all cases of wounds of the abdomen, where the cavity is penetrated, it should be opened and explored, intestinal wounds repaired and the cavity thoroughly washed out and drained. This is a position that nearly all advanced surgeons maintain. This case only serves to add that much more proof to the argument.

Since the introduction of the Murphy button, repairs can be quickly made in the bowel. The object of this paper will not permit a minute description of the toilet and surgical procedures in such cases, but I will say this much, that a surgeon who will let a man who is injured in the abdominal viscera die without opening the cavity, provided he sees him when not in collapse, and washing it out, repairing damages and draining, is remiss in his duty. We should not wait for alarming symptoms to appear, for when they come, the patient usually goes. Quick, clean work, small incision, even left unclosed if necessary, to save the patient from collapse, and ample drainage will often save life. In this case I do not think I did the best think for my patient by waiting, although he pulled through without operations. I think now a drainage tube in his abdomen the second day would have saved him much suffering and risk to his life. Had I known at first that the liver was uninjured, I would have opened the abdomen the second day. The time that has elapsed before a patient is seen where the cavity of the abdomen has been penetrated has much to do in the prognosis of an operation. After 24 or 36 hours have elapsed, peritonitis or sepsis may, and generally have supervened if the bowel has been penetrated. An operation after these had set in is not so hopeful of good results as before such conditions have taken place. Hence, the earlier the case is seen the greater the possibility of good results from operation. There is more time at the disposal of the surgeon, and he can make a more careful and intelligent search for wounds of the viscera, with less liability of shock and collapse. When these conditions exist, an operation should not be denied; but here it should be limited to the real necessity of the case, and no attempt at ideal surgery made.

The abdomen should be opened quickly, under cocaine, if great weakness is present, and flushing with hot water, drainage, even without stitching the incision if necessary simply closing it with bandages and dressing, putting patient to bed and trying to save his life.

Life here is at stake, and everything should be held in abeyance to that one idea. Insufflation is not to be relied upon here, only in so far as it may aid in discovering the perforations in the bowel, after the incision has been made, and during the operation to prove the integrity of the bowel. Even here the great distention produced in the bowel will often be a source of great inconvenience.

The cases shot in the knee joints and ankle were remarkable in that neither joint was greatly injured, one scarcely any, and the other so slight that it can hardly be detected. Pistol and rifle balls are more or less disinfected by the heat from the discharge, and possibly from their rapid flight in the air, and will often remain in the tissues harmless for years. From this fact I do not deem it prudent in injuries of this character to be zealous to find the ball and extract it. More injury is sometimes done by the probe and forceps than by the ball itself. The wound should be carefully and gently examined and all filth, dirt and clothing removed from in or around it. This can be done without great pain or inconvenience to the patient, and dressed antiseptically. Agnew recommends immediate search and extraction of the ball, if possible. This under some conditions is correct and is good surgery, but not under all is it advisable. Where a large ball from a larger pistol or rifle enters a portion of the body at such place as can be reached the traumatism is so great that it may be best at once to seek the ball at the risk of much pain and inconvenience to the patient. A large ball usually carrying so much material with it, such as clothing etc., that it is almost impossible to have the wound heal without suppuration.

With smaller balls it is different. The wounds often heal without any trouble.

Of course good sense and judgment must often govern us in practice under varying circumstances. Shock must be considered, and the organ or portion of body affected will have much to do with the results of interference. I have often seen wounds made by small balls heal with scarcely any inflammation, giving no trouble afterwards, or later the ball attaining a position from which it can be easily removed. The history of these three cases demonstrates the fact that all such wounds need not be probed nor the ball extracted from them to save life or limb. Where the ball can be removed without violence or danger to the patient it should be done, otherwise it should be left to nature and antiseptic treatment.

ANEURISM OF THE ARCH OF THE AORTA.

R. M. WIGGINTON, M.D., WAUKESHA, WIS.

Frank M., aged about forty; American birth, Irish parentage; nervo-bilious temperament; not robust health; weight 140 lbs.; a dining-car conductor.

This gentleman came to me for treatment June 30, 1893, complaining of easy exhaustion upon exercise, slight difficulty in breathing and some pain and aching in the apex of chest, more particularly upon the right side. He was quite nervous, with an expression of alarm in his countenance.

Upon examination I found the valvular mechanism of the heart apparently a-right.

An impulse of the chest wall could be distinctly felt to the right of the manubrium of the sternum, especially within the intercostal spaces of the second, third and fourth ribs.

Upon auscultation, a distinct murmur *souffle* could be heard over that part of the chest wall giving the greatest impulse to the hand. This sound corresponded with the systolic movement of the heart and resembled very much the diastolic, regurgitant murmur in disease of the aortic valves.

I told the patient that I suspected aneurism of the arch of the aorta, and directed treatment accordingly, which, in brief, was quietude, regard to diet, care of the stomach and bowels; and as medicine, ergot and iodide of potassium.

Under this treatment he soon began to improve, and on July 22d he came to my office feeling, as he said, quite well.

However, upon examination, I told him he was not well, and warned him against all excitement and labor, and not to return again to work until he saw me. Contrary, however, to my advice, he almost immediately resumed his work again as conductor on his dining-car. I did not see or hear from him again until September 6th, when I was called to visit him in Chicago. I found him at the Baptist Hospital. He was very much prostrated, and the disease, which was unmistakably aneurism of the arch of the aorta, was advancing rapidly. The tumor was rapidly growing and protruding itself through the second and third intercostal spaces, and was very evident to both the eye and the touch.

Owing to his great desire to die at home, he was placed in an easy riding-car and brought home to Waukesha a few days after my visit. He rapidly went through all the phenomena common to this form of aneurism, finally dying October 11th from suffocation from the pressure of the tumor upon the trachea and apex of the lung and larger bronchi.

Post-Mortem Examination.

Fully two-thirds of the right cavity of the chest was filled with the tumor, the right lung having nearly disappeared through pressure and absorption. The aneurism was of somewhat irregular shape, conforming largely to the chest walls; in fact, the walls of the chest, the heart and the remnant of the right lung, together with the convex or upper surface of the diaphragm, constituted the boundary walls of the tumor, the crescentic layers being in part bound fast and intimately blended with the pleura, and could not be dissected off. The aneurism contained within its cavity about a quart of semi-clotted blood; and the walls, composed of crescentic layers, were in many places from one to two inches thick and firmly organized.

The aneurism had gradually burrowed through the walls of the chest, destroying the soft parts, the sternal ends of the clavicle, first second and third ribs, and a portion of the sternum, upon the right side, leaving the sharp ends of these bones sticking well into the isthmus of the tumor, which again spread out over the chest beneath the muscles and integument, like a large flattened orange.

The aneurism seems to have originated at the second segment of the arch.

I make this report simply for its statistical value.

COMMUNICATIONS.

A CLINICAL STUDY OF THREE CASES OF SPONTANEOUS HÆMOPHILIA IN BROTHERS.*

JUDSON DALAND, M.D.,† AND W. DUFFIELD ROBINSON, M.D., PHILADELPHIA.

The occurrence of three cases of hæmophilia in one generation, with the tendency so marked that in two of the brothers there was a fatal termination, justifies the addition of this report to the literature on the subject.

CASE I.—Boy, aged thirteen, living in Pennsylvania, at an elevation of 1800 feet. He was born at full term, and there was nothing unusual or remarkable during pregnancy or delivery, nor was there unusual bleeding. For eight months he was healthy and vigorous, and the skin was exceedingly clear, transparent and pale. At that time he was taken with cholera infantum, and was ill three months. His recovery was coincident with the first frost that occurred that year, to which climatic condition his physician ascribed his recovery.

As his mother was unable to supply nourishment he was fed by the bottle. During the last two weeks of his illness there was noticed a profuse petechial eruption over the abdomen, the back and the legs, and, to a less extent, over the arms. The eruption was described as rounded, non-elevated spots of the size of a pin-head, black in color, uninfluenced by pressure, evidently purpuric in character. There was no hemorrhage from any of the mucous membranes.

After this illness he remained well until about the age of five years, when he suffered from an attack of arthritis, affecting especially the elbows, knees and wrists, and this was accompanied by fever and acid sweats. The joints were swollen, red and painful. Relief was apparently obtained by the use of moist applications and the internal administration of salicylic acid and salicylate of sodium. From the fifth year up to the present, the thirteenth year, he has averaged one attack of arthritis every two months, and the peculiarity of these attacks, which usually followed exposure to cold or wet, was that the symptoms appeared forty-eight hours after the exposure. Recently the attacks have been less frequent and less severe. Soon after the fifth year the arthritis was so severe that considerable ankylosis ensued, necessitating the use of crutches until the ninth year, when relief was obtained from Swedish movements and massage. At the age of eight he had an attack of measles, whooping cough and scarlatina, from which he recovered without any complications or sequelæ. Since the age of five he had, approximately, *fifty* attacks of hemorrhages from various mucous membranes, but there was no recurrence of purpura. His father has observed that prior to the hemorrhages there would be grinding of the teeth or the face would become flushed, and in consequence he was frequently able to foretell an attack. Most of the hemorrhages were nasal, but on two occasions hæmatura followed trauma of the renal region, and on one occasion hæmatamesis, from the same cause, applied to the abdomen. Later he accidentally bit his tongue, which was followed by oozing, and then free hemorrhage, which continued for seven days. To control the nasal hemorrhage many remedies were employed, but relief was only obtained when ice was applied to the nape of the neck and to the bridge of the nose, *after* large quantities of blood had been lost and when the physician in attendance thought death was imminent. For the injury to the tongue Monsell's solution was first used, which caused a cessation of the bleeding for a short time; but soon the coagulum was loosened by the oozing of blood of saliva, so that the hemorrhage was more violent than at the first, owing

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to the destruction of the tissue produced by the remedy.

Effort to check the hemorrhage from the use of intense cold produced by an ether spray proved valueless, as the spray could not be continued for a sufficient length of time, owing to the danger of ether narcosis and the repeated attacks of vomiting excited by the anæsthetic.

Compression by means of forceps was attempted, but owing to the site of the injury, which was on the side of the tongue, about two inches from the tip, it was extremely difficult to properly apply the forceps for any length of time without exciting gagging and vomiting.

Ice was applied for five minutes, until the wound was partially frozen; then it was removed for a similar time, and subsequently reapplied. This was continued for twelve hours, after which the hemorrhage ceased. At that time he showed all the evidence of extreme anæmia and caused his physician to think that death was imminent. Fluid extract of ergot was given in thirty drop doses every three hours.

After each of the hemorrhagic attacks there was nausea and vomiting. When the finger was cut it bled continuously for hours, and was only relieved when Monsell's powder was applied. His father distinctly recalls a number of occasions when this boy received a slight blow on some part of the body, so slight as not to produce even a bruise in a normal individual, which was followed by great pain, swelling, fever, and discoloration of the skin, showing that a considerable extravasation of blood had occurred. The greatest swelling was observed forty-eight hours after the reception of an injury, at which time the pain disappeared. The slow development of this swelling and discoloration of the skin would seem to prove that the more deeply-seated blood vessels were ruptured, from which oozing took place. The slight traumatism was able to produce this result owing to the extreme vulnerability of the walls of the blood vessels.

The patient has been always intensely nervous and sensitive, and frequently, after suffering from an attack of so-called articular rheumatism, he complained bitterly of pain in the joints from the vibration produced by anyone walking about the room, even though his parents were unable to detect any movement of the bed which he occupied.

A week ago, while visiting Philadelphia to receive massage for partially ankylosed joints he was observed to be extremely nervous, with choreiform twitching of the muscles of the face. That night there was grinding of the teeth, and the left edge of the tongue was bitten about half an inch from the tip, produced during sleep by the grinding of the teeth or from a slight convulsion. The following day there was a slight oozing, which continued for seventy-two hours, and increased until he lost about one ounce of blood per hour.

Many local remedies were tried, among which may be mentioned the use of powdered alum, antipyrine, Monsell's solution, and ice, but all proved valueless. Large doses of the compound syrup of the iodobromate of calcium were administered, and also ergot, oil of erigeron, and gallic acid; but these remedies were inefficient. On the sixth day of the hemorrhage I was given an opportunity of studying the case with his attending physician, Dr. W. Duffield Robinson. I found the patient to be well developed, his skin and mucous membranes were pale, the pulse frequent, feeble, and regular. The heart was slightly dislocated toward the right, the apex beat could be felt in the sixth interspace, but occupied a somewhat larger area than normal; the first sound was weak and the second sound sharp and accentuated. No murmur at the apex was audible, although a systemic murmur had been detected by Dr. Robinson at a previous examination. Over the aortic cartilage a sharp second sound was heard, and the pulmonic second was also sharp. Despite the high grade of anæmia present no hæmic or other murmur was audible. The examination of the lungs and abdominal viscera was negative. The skin was carefully examined, but only one purpuric spot was detected, on the inner surface of the left knee-joint, occupying an area having a diameter of three-fourths of an inch. It was supposed that this was due to a slight injury, as no other subcutaneous effusion of blood occurred. The right leg was slightly shorter than the other, and the left knee-joint was considerably enlarged. The muscles of the legs were moderately atrophied. The physiognomy showed that the patient was intellectual, bright, precocious, and the skull was capacious.

As several acts of vomiting had oc-

curred, and nausea and intense thirst were complained of, the administration of food and remedies by the mouth was suspended, and a nutritive enemata given, to which fluid extract of ergot was added. To secure relief from nervous and muscular excitement, and to insure quiet, large doses of paregoric were given per rectum, with 15 grains of trional to secure sleep. On the seventh day, from 6 A.M. till noon, the father, who had observed him continuously, reported that the amount of blood was trifling and that very little had been swallowed. During this time ice had been applied every alternate five minutes. His condition showed that a considerable quantity of blood had been lost during the previous twenty-four hours. It was observed that the pulse at the wrist numbered 70, while the heart-beats were 130 per minute.

Physical examination showed that the arterial system was partially empty and the veins collapsed. It was evident that the peripheral circulation was imperfect, as not more than half of the systoles of the heart were able to produce a pulse at the wrist. This condition of the peripheral circulation, the increase in the amount of fibrin that occurs after large hemorrhage, together with the muscular and mental quiet produced by opium, were counted to favor the formation of a coagulum, thus checking the hemorrhage. A minimum quantity of water was allowed, despite severe thirst, so as to prevent refilling of the almost emptied vessels with the concurrent increase of blood pressure and danger of expelling a slow-forming clot. An examination of the blood showed that it was rather lighter in color than normal, liquid, and, notwithstanding the large quantities lost there was but little tendency to the formation of clots. This want of coagulability was and always has been a marked characteristic of each of these hemorrhages.

Microscopic examination of the blood showed an enormous number of very small microcytes, many of which were mere points. There were a few macrocytes and a moderate increase in the number of leucocytes. There were no parasites nor distorted red blood-cells, and crenation and rouleauxing were normal. The blood for this examination, which was obtained at the end of a protracted bleeding spell extending over a week, showed a decidedly greater tendency to clot than on any former occasion.

The Thoma-Zeiss hæmocytometer showed 3,775,000 or 75.5 per cent, and Fleishl's hæmometer showed 62 per cent. of hæmoglobin.

The next day an examination showed well-marked evidence of quantitative and qualitative anæmia, no hæmic murmurs audible, although especially searched for; the blood from the prick of the finger showed a normal tendency to clot, and the hemorrhage, which had recurred, instantly ceased when Dr. Robinson made a local application of a 4 per cent. solution of cocaine. The stomach was more retentive, and there were evidences of beginning convalescence.

The condition of the blood gradually improved, and an examination made two weeks later gave the following results: The blood emerged from the puncture freely, much more so than from a healthy individual. It was of a good color and coagulated slowly. Microscopically the blood presented a normal appearance, with the exception that there were rather more large red corpuscles than are ordinarily seen. The microcytes had entirely disappeared. The color of the red cells was somewhat paler than normal. The Fleishl hæmometer showed 70 per cent. of hæmoglobin and the hæmatokrit showed 84 per cent. of red cells. There was no leucocytosis.

At this time the finger was accidentally cut, and hemorrhage continued for thirty minutes despite the application of ice. When a 4 per cent. solution of cocaine was employed the bleeding was checked immediately, and did not recur.

Family history: The first child was born prematurely and died shortly after birth. The second child was a boy, who was perfectly well up to sixteen months old, at which time he began to bleed from the nose, and developed hydrocephalus at the age of three-and-a-half years. The attacks of epistaxis from which he suffered were frequent, severe, and uncontrollable. He would almost bleed to death, and then gradually recover. There were no other mucous membrane hemorrhages, and at no time was there purpura. This child finally died of hemorrhage from the nose. The third child was a boy, who was perfectly healthy until the age of two years, when he died within forty-eight hours

from malignant scarlet fever. At no time was there any tendency to hemorrhages nor evidence of hæmophilia. The fourth child was a boy, who died of hemorrhage from the mouth at the age of eighteen months. He was anæmic, poorly developed, and an eruption was observed upon the skin. The firsthe morrhage occurred when he began cutting teeth, and the quantity of blood lost was considerable. Later, when the molars were erupted, a fatal hemorrhage occurred, despite the use of every known means for its relief. The fifth child was a girl, who died at the age of three months without showing evidence of hæmophilia.

The mother of these children is one of a family of ten, all of whom were healthy. She has never shown any tendency to hemorrhages, with the exception that after the extraction of a tooth she observed that the amount of hemorrhage was greater than normal. This fact was well recognized by the dentist who would extract one tooth, but declined to remove a number at one time. The father has never shown any hæmophilic tendency, denies syphilis, and has always enjoyed good health. The maternal grandfather is said to have been "scrofulous," and had enlarged cervical glands, which might have been tubercular or syphilitic. With this exception the other members of this family, which are numerous, and may be traced to the third and fourth generations, have never known of a single case of the bleeders' disease. The father's family was also traced to the fourth generation, and the members of it were intelligent, healthy, and vigorous, not a single case of hæmophilia having occurred.

Remarks.—The cases are particularly interesting for the following reasons:

1. That each of these cases occurred in brothers.

2. That they all showed the first tendency to hæmophilia at an early age, particularly while teething. The oldest patient's trouble began with epistaxis, following an attack of cholera infantum, which may have been a gastro-intestine purpura. The first case is also interesting from its associations with arthritis, from the statement that frequently the hemorrhage would occur in forty-eight hours after an exposure which would excite a coincident attack of arthritis and fever.

3. The fact that slight trauma would produce extensive hemorrhage, proving that the blood vessel walls were remarkably fragile.

4. The extraordinary diminution of the coagulability of the blood.

5. The valuelessness of all the ordinary local remedies and agents for the relief of hemorrhage from the wound of the tongue, with the exception of the local influence of cocaine and ice and the internal administration of the fluid extract of ergot. We are disposed to attribute the greatest influence to the enormous loss of blood, by which not only was the fibrin increased, but also the peripheral circulation was slowed, so as to allow of the gradual formation of a thrombus. The use of cocaine as a local hæmostatic was suggested by Dr. W. Duffield Robinson. The remarkably brilliant results obtained in the first case lead us to hope that similar good may be obtained in other cases.

6. The occurrence of marked flushing of the face as a precursor of an attack of hemorrhage.

7. The opinion of the father that the intense nervous excitement produced by these violent pains in these attacks of arthritis may be a cause of epistaxis.

8. The greater frequency and violence of these hemorrhages since removal from an altitude of 1,800 feet to that of 2,200 feet, and the consequent deduction that hæmophilics should be removed to the sea level.

9. The occurrence of repeated attacks of acute arthritis with intense pain, redness and great swelling in association with fever and sweating, which are so frequently observed in hæmophilics, and the fact that they were erroneously diagnosed as attacks of rheumatism. The want of coagulability of the blood at the time of these acute outbreaks, their occurrence forty-eight hours after exposure to cold or damp, the frequent coincident occurrence of hemorrhage, and the absence of endocarditis, are all points in favor of the supposition that these were not attacks of rheumatic arthritis, but were hæmophilic in origin, perhaps due to the effusion of blood into the joints.

10. The second case is interesting from its association with hydrocephalus and the occurrence of death from epistaxis.

11. The third case illustrates the importance of teething in producing the first manifestations of hæmophilia, and shows how death may occur from this cause.

LOCAL ELECTROLYSIS AND ZINC-AMALGAM CATAPHORESIS IN MALIGNANT AND NON-MALIGNANT TUMORS.*

G. BETTON MASSEY,† M.D., PHILADELPHIA.

Before reporting the three cases on which this new treatment of morbid growths is mainly based I must explain what I mean by local electrolysis and zinc-amalgam cataphoresis, and also advance reasons for my belief that these methods either separately or together present important advantages over cutting operations in certain cases of benign vascular growths and incipient cancers.

Local electrolysis means simply that the electrical decomposition of the tissue salts is confined to a localized area by the approximation of the poles. If both poles of a galvanic current be placed in the morbid tissue quite near each other the bulk of the current will be concentrated within the portion of tissue immediately between them, and but little will traverse the outside healthy parts. In practice they should not be further apart than from a half to one inch, though this depends entirely on the strength of current to be used and the size of the growth. So placed, an enormous current may be employed to dissolve a morbid tissue without affecting surrounding tissues, the parts having been chilled by a spray, or otherwise rendered anesthetic, if sensitive. The surgical possibilities of such currents are quite remarkable. All the salts and liquids of a given growth lying between the points become a prey to such a current, the watery contents being turned into oxygen and hydrogen gases, and the complex salts into solutions of acids and alkalies. This is, of course, attended with a material rise of temperature, but nothing like charring. If the tissue subjected to the process is soft and vascular, or juicy, there will be very little left between the poles after the gas has been given off but the acids and alkaloids dissolved in a turbid liquid remainder. If the tissue is tougher and more fibrous a gristly residue will be found which can be detached or left to be detached by nature.

The strength of current required to destroy tissue in this way depends altogether on its concentration at the active spot. A minute reproduction of the process occurs when we apply but two or three milliampères to the papilla of a hair sheath, or to a mole on the skin; but to completely dissolve tissues between two or more needles a half inch apart requires at least four hundred to seven hundred milliampères.

Whether this portion of my method has any advantages over a cutting operation in removing malignant or non-malignant external growths depends upon circumstances. It is clearly inapplicable to any growth within the body unless it is situated in a drainable natural cavity, as a considerable quantity of detritus must drain away. It also presents the disadvantage of not permitting healthy tissues to be united at once over the seat of the removed growth, a procedure, however, that is often of doubtful utility, as it frequently covers up portions of the disease that failed to be removed. The advantages of the method over the knife are, on the other hand, by no means inconsiderable. It is absolutely bloodless, no matter where applied, thus enormously conserving strength after operations notoriously bloody; the edges of the undestroyed tissue remain non-absorbent, lessening risk of sepsis; and finally there seems to be some property in the galvanic current to cause a retrogression of the whole of a benign growth even when but a portion is directly acted on, as in the Apostoli treatment of fibroids and the ordinary treatment of moles and other small skin tumors.

If the growth be a benign one the application described will probably cover the whole of the active treatment. If it be malignant, on the contrary, the second portion of the method—zinc-amalgam cataphoresis—is employed, a procedure of great value in radically removing all re-

*Read before Philadelphia County Medical Society, January 9, 1895.

†Physician to the Gynecological Department of the Howard Hospital and to the Sanatorium for Diseases of Women and Diseases of the Nervous System, etc.

maining traces of a still localized cancerous growth.

Zinc-amalgam cataphoresis is electrically mono-polar, the single active electrode, which is always positive, being applied to the cavity left by removal of the greater portion of the growth, while the indifferent or negative electrode, in the shape of large conducting pads connected together, is placed on any convenient portion of the body. The active electrode is a freely-amalgamated zinc surface of one or two square centimetres area, which is held successively against all portions of the bottom and edge of the excavation. From 150 to 300 milliampères are sufficient, the pain being controlled by cocaine in solution placed in the excavation beneath the electrode, to be conveyed into the tissues simultaneously with the nascent oxychloride of zinc and mercury which is dissolved from the electrode by electrolysis.

By this procedure we search out and destroy all remaining spurs and paths of infection in the contiguous unhealthy and healthy tissues, the current seeking vascular and cellular paths of less resistance by preference in its journey to the other pole; and to the lethal effect of the current we add the well-known lethal effects of nascent mercury and zinc compounds. The surface of the amalgamated zinc electrode is consumed in the process—the mercury as well as the zinc—producing a mixed infiltration of the immediate polar region that is readily detected by the eye. Low organisms in the immediate neighborhood of the electrode quickly succumb, and the antiseptic value of the procedure is shown in the correction of any odors that may have accompanied the cancerous discharge. That the action is not confined to the immediate neighborhood of the electrode was well demonstrated in one case in which the zone-like base of a cancer was observed to lose its induration and shrink in places at least an inch distant from the contact point.

The applicability of the first portion of the method—local electrolysis—to a benign growth in the following case:

Case I. *Large intra-uterine cystic fibroid destroyed piecemeal by repeated applications of bipolar local electrolysis, resulting in a satisfactory cure.*—Mrs. D., a nullipara, aged thirty-nine, was referred to me by Drs. Hemminger and Bixler, of Carlisle, Pa., in September, 1892. Six or seven years previously Dr. Hemminger had discovered an intra-uterine growth, the lower portion of which later was found to be projecting from the dilated os, giving rise to pain and hemorrhage. Efforts to remove the growth by the écraseur were made by Dr. Hemminger, but, owing to its extensive internal attachment and great vascularity, only the projecting parts were removed. When the case was admitted to the Sanatorium the tumor was nearly the size of the adult head, the upper limit being even with the naval. The mass was symmetrical in shape, soft and semi-fluctuating. Examination showed the os fully dilated, through which projected a portion of the tumor the size of the fœtal head. Around this projecting mass several fingers could be swept, showing freedom from adhesion to the uterus for three inches anteriorly and about six inches posteriorly. The mass was evidently a vasculo-cystic fibroid situated within the cavity of the uterus and attached to the uterine walls throughout three-quarters of its periphery. It was spongy, but very tough, bled easily, and gave rise to a copious watery leucorrhœa. The conditions presented by this growth, particularly its cystic degeneration, absolutely contra-indicated the ordinary Apostoli treatment of fibroids on account of the danger of producing sepsis. I accordingly attempted its removal by morcellement, using the scissors, dull scalpel and fingers, but was compelled to desist, owing to the frightful hemorrhage. In this dilemma the possibilities of localized destructive electrolysis occurred to me, and it was begun by the use of a bipolar instrument having four prongs, two to each pole. These prongs were buried in the projecting portion of the tumor, and 700 milliampères turned on for six minutes. This dissolved quite a hole in the morbid tissue, making a spot too hot for the finger. The procedure was repeated daily as fresh portions of the growth were pressed down by the contracting uterus, without hemorrhage or marked discomfort, the possibility of sepsis being guarded against by a continuous douche for an hour or more after each application. Three months were consumed in the eradication of the tumor in this way, though it doubtless could be done in a second case in a third of the time, the final examination showing

nothing but a roughened spot on the anterior wall of the contracted uterus. External measurements now showed the upper limit of the uterus two and one-half inches below the naval. The cavity was capacious.

A letter from Dr. Bixler dated February 26, 1894, stated that the patient was quite restored to health, complaining only of prolapse of the vaginal walls, the latter doubtless due to the descent into the pelvis of a uterus that had so long been within the abdomen. The cavity was still large, and there was some thickening of the walls on both the right and left of the uterus. The os would only admit the first joint of the finger.

In November, 1894, two years after the patient's admission, her husband called and reported her as in good health.

CASE II. *Sarcoma of tonsil and soft palate cured by local electrolysis, followed by zinc-amalgam cataphoresis.*—W. H. L., blacksmith, aged thirty-eight, was also referred to me by Dr. Hemminger, February 17, 1893. Five years before he suffered from an abscess of the ear. Two years before being seen by me the left tonsil was found to be the seat of a tumor. He had recently been sent to the Hospital of the University of Pennsylvania, where, he says, malignancy was diagnosed and an operation proposed, which he declined.

A tumor about the size of a goose egg filled the pharnyx, involving the tonsil and soft palate, and threatening suffocation. Liquids could be swallowed with much difficulty.

The patient was placed on monopolar negative punctures, 30 to 60 milliampères, daily. But little progress being apparent at the end of a week, the parts were cocainized and subjected to bipolar local electrolysis with from 200 to 350 milliampères, on two occasions. The separation of the eschar that resulted was accompanied by considerable pain and reaction, but as the place healed it was found that but little of the tumor remained. He did not return for further treatment until more than a year had elapsed, during which he seemed to be well. At this time, however, a renewal of the growth occurred, and it was about the size of a peach-stone when he was readmitted to the Howard Hospital for further treatment. During this second treatment zinc-amalgam cataphoresis was mainly employed, the treatment lasting six weeks and being carried deeply into the base of the growth. A complete cure resulted, and at an examination of the parts six months later a healthy scar only was to be seen.

CASE III. *Inoperable carcinoma of the groin greatly relieved by zinc-amalgam cataphoresis; death from erosion of femoral artery and gangrene.*—Colonel H., aged sixty-two, was sent to me by Dr. A. W. KNOX, of Raleigh, N. C., in the summer of 1893. One year before he had noticed a lump in the left groin. On admission to the Sanatorium the tumor was the size of a large walnut, of a bluish color, and firmly attached by a broad base to the deeper parts of the thigh. It was situated just below Poupart's ligament and lay immediately over the femoral artery and vein, and was apparently attached to the latter, though the exact location of the artery was uncertain owing to the general induration.

At the patient's request it was decided to make a tentative use of electricity. The central and projecting portion was accordingly destroyed by local electrolysis, making a slight cavity into which a solution of cocaine was poured. Into this the blunt amalgamated zinc electrode was pressed and daily applications of the cataphoresis made, with currents averaging 150 milliampères. The immediate effect of the application was to whiten the edge of the growth in contact with the electrode, the whitened coating peeling off later. The indurated ring and base that now represented the growth was about three inches wide. Under constant applications the whole of this was gradually destroyed and replaced by healthy granulations, except the center of the base, where the close proximity of the large artery rendered the applications unwise. At the end of three months the diseased area had been contracted to the size of a five-cent piece, but this was a deep cavity extending down to the great vessels, where it was thought to be unsafe to apply the current. The patient had increased twenty pounds in weight, and though brought to the Sanatorium on a stretcher, was now able to walk a half mile or more. During the continuance of this improved condition, however, the artery suddenly gave way one day at the bottom of the untreated spot. Drs. Thomas S. K. and T. G.

Morton were called in and tied both artery and vein, which were found thoroughly infiltrated with cancerous material for some distance upward into the abdomen. Gangrene of the limb supervened, followed by death two weeks later.

An estimate of the value of the method in these three cases must be comparative, as cases similar to each are usually subjected to other methods, removal with the knife being the favorite. Hysterectomy in the first case would, of course, have involved removal of the ovaries also. Both this and removal of the uterus itself were avoided entirely, no natural structures being even injured, and the time required in the treatment was probably not longer than that necessary to recovery from the effects of abdominal section. In the second case the bloodless removal of a sarcoma of the palate was followed by a treatment that I hope will render the patient less liable to a return of the disease. The third case was, of course, a failure to cure or to preserve life, yet it is thought that life was prolonged by the very evident curtailment of the growth and improvement of health. Comparisons were hardly possible, however, as an operation had been refused by one surgeon as useless.

ILLITERATE BOORS IN THE PROFESSION.

The *Texas Health Journal* provides its readers with the following treat:

The Cheap-John medical colleges and reckless medical examining boards of the country are daily turning out large numbers of ignorant fellows with the title of M.D., who are a burning shame and disgrace to the noble profession of medicine. This is not all. They are dangerous to the public welfare. Who is to blame? The colleges and boards who, for a paltry sum, permit these fellows to roam at large. These colleges and boards are always "ethical." Certainly each and every one must endorse the code of ethics or he is not eligible for the position in a college or on a board. I give below a letter sent me by Dr. H. Riley, of Bowie, Texas, and written by one of these boors to the postmaster at Bowie. It is only one of many such letters sent the *Journal*. The *Journal* occasionaly publishes such letters with the hope of raising the standard of medical education by holding colleges and boards up to shame, as they deserve. The following is a verbatim copy of the letter written from Memphis, Texas, to the postmaster at Bowie by an alleged "doctor:"

MEMPHIS Hall co texas 12—2—93

MR. POSTMASTER AT BOOEY

Please tell me what the popolation of yor town is and how meney Dos thair is thair and is the soronding coontrey a fertill coontrey or not and eff yo have soft water &. doo yos Rais corne & oats & cotton il not ask aney more questions as . i may wairey yos with questions. I am in the Pan handle trying too dispose of some cattle after so dooing i am Ready for .a. Location whair thair is sChools .& Churchis . i am 51 yairs of age have a wife & 1 grone sone. &. 3 small boys all too school. i. am from Lee. co. Missippi hop yo will anser this and oblige at once

P. S

i am not very ancios to Locat in town i am a. graduat of Medison and sergery so acknowledg By the state Board of Texas

Respectfoly,

Dr. T. G. H.

An Early Grave Complication of Pharyngeal Diphtheria.

Aufrecht, *Therapeutische Monatshefte*, calls attention to a particular form of diphtheria of the pharynx, which despite its limited local extension, rapidly kills the patient in two or three days. It has been held that these almost fondroyant cases were to be attributed to a grave infectious myocarditis. Recently, however, the author has observed three cases of this kind where the autopsy showed no trace of myocarditis, but a sub-acute nephritis. The author, therefore, insists upon the importance of systematic examination of the urine from the beginning of diphtheria, even when no symptom points to a renal lesion. The symptoms observed in these cases have been very great frequency of pulse, a semi-comatose condition, delirium, high fever, and marked albuminuria. Guided by these cases the author has been able in a fourth case to combat this nephritis in the beginning by the administration of large quantities of alkaline and saline water (Wildungen) for the purpose of increasing diuresis and relieving the chocked-up kidneys.

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SATURDAY, MARCH 16, 1895.

EDITORIAL.

LARGESSE! LARGESSE!
THE INSPIRATION OF PROFESSIONAL PHILANTHROPY.

With the assembling of each new legislature of this State, there is an invasion aptly described by the old nursery rhyme:—

"Hark! Hark! The dogs do bark.
"The beggars are coming to town.
"Some with rags, some with 'jags,'
"And some with silken gowns."

On every hand is the cry for "Buck-sheesh!" and appeals for "Largesse!" That the almoners of the common-wealth have been bewildered, befuddled, cajoled or convinced is demonstrated by the official records, which show an undue proportion of the public bounty bestowed upon undeservers, to the great detriment of the truly needy. Reference is made to state appropriations for private hospitals, particularly to those of this city, and the unfortunate provisions for some comtemptible productions of *Professional Philanthropy*, while the necessities of the State's own wards are barely supplied.

Our friend, *The Medical News*, accepting the risk of making itself to be disliked by interested parties, presents some interesting figures, with some strong editorial comments which we are glad to repeat and to endorse:

"Before the Pennsylvania State Legislature the various charitable institutions have laid their applications for appropriations for the years 1895 and 1896. The amounts asked for by hospitals of the third class, that is, hospitals owned and controlled by private corporations, are

For the year 1895	$1,446,211 93
" " " 1896	1,019,500 00

"About one-half of this is for new buildings or for removing debts of mortgage, and one-half for maintenance.

"When an individual endows a bed in a hospital he has a right to send anyone there, at any time, to occupy such a bed. When the State gives a grant of $50,000 it virtually endows ten beds, yet does not possess any right to such beds. The only place a poor incurable tuberculous or other invalid needing the attention a hospital can give has a right to go is the

Philadelphia Hospital, and here, alas, there is but little room for him.

"The private hospitals obtain their appropriations only through strong lobbying, and if a charity has a "pull" it can get almost anything it wants.

"A few individuals organize a hospital, largely and principally for their own benefit, and then obtain appropriations from the Legislature, by which they can erect costly buildings and bring themselves into prominence.

"If institutions are to receive State aid, they should be under State control, and where it is found that over-lapping exists, that one institution can do the work of two, the other should be dropped from the State list.

"The following Philadelphia hospitals are represented in the applications:

Name of hospital.	Amount asked for 1895.	Amount asked for 1896.	Amount received in past six years.
Hahnemann	$67,000	$50.000	$73,546
University	50,000	50,000	135,000, 4 yrs.
" Maternity	5,000	5,000	
" Veterinary	5,000	5,000	30,000, 4 yrs.
St. Timothy's	12,500	12,500	7,000, 2 yrs.
Kensington, for Women	13,500	5,000	5,000, 2 yrs.
Polyclinic	25,000	25,000	87,000,
Jefferson	50,000	50,000	130,000
Woman's	25,000	25,000	25,000
Howard	2,500	2,500	
Medico-Chirurgical	82,500	82,500	170,000
Rush Hospital	75,000	75,000	
West Phila., for Women	12,500	12,500	
Women's Homeopathic	17,400	17,400	67,000
Children's "	17,000	17,000	8,000, 2 yrs.
St. Christopher's	5,000	5.000	
Philad'a Lying-in Charity	7,500	7,500	15,000
Southeastern Dispensary	2,500	2,500	
Orthopedic	23,500	23,500	30,000
Maternity	8,000	5,000	15,000
Gynecean	20,000	15,000	85,000
Wills Eye	10,000	10,000	40,000, 4 yrs.
Samaritan	30,000	30,000	
German	10,000	10,000	40,000, 4 yrs.
Hospital for Incurables	20,000	20,000	

"It will be noticed that all of the foregoing institutions, with the exception of Wills Eye Hospital, which is in trust of the city, are strictly private concerns. They are not obliged to render account to any public official. The funds received may or may not be applied to the purposes for which they are asked.

The Governor has but recently stated that economy is necessary in the affairs of the State. Let the Appropriation Committee turn to the private hospitals first.

"We want a State Hospital for Epileptics and two or three for tuberculosis, but let these be managed by the State as the hospitals for the insane are.

"We hope that the medical profession of Pennsylvania will enter a protest against indiscriminate grants to private charities, and ask that State moneys be applied to institutions under State control."

THE REPORTER agrees with these views. There is neither wisdom nor propriety in delegating the expenditure of public funds to persons or institutions not under the controlling supervision of the State authorities—not even accountable for the use made of the people's money.

We do not in any sense condemn private hospitals, but we call attention to the broad distinction between hospitals private, as popularly understood, and private as defined by the Legislature. The former are provided and conducted by one or more individuals entirely at their own personal expense; the latter are enterprises originated and manipulated in the interest of individuals but entirely without expense to them personally. These private hospitals are usually corporate bodies professedly dependent for support upon voluntary contributions of the community.

They are not necessarily unworthy of aid. Indeed, many of them are deserving of most generous support, but it should not come from public funds unless the State is able to compel the proper expenditure of the money granted.

However, since private hospitals have been and will be afforded aid by the State, the keenest discrimination should be made against the speculations of Professional Philanthropy.

A prominent member of the Lower House is authority for the statement that the entire amount at the disposal of the present Legislature will scarcely exceed $9,000,000. Of this sum five and one-half millions must be devoted to the public schools, and out of the balance must be paid all other expenses whatsoever, incurred by the State Government, including such appropriations as may be made to applicants for State aid. Under the circumstances there would seem but little chance for helping private institutions, although these institutions when applying for stated amounts fully expect a reduction of from thirty to fifty per cent., and provide for this discount in making their application, so that if the anticipated discount is made they will receive all that was really hoped for when making application.

Before any application of the third class is entertained, the institutions that are directly managed by the State should be liberally provided for; if anything remains, those institutions over which the State has partial control should receive consideration; and in the improbable event of a surplus, careful attention may be given to the private hospitals. Under no consideration should assistance be granted to the projects of Private Philanthropy.

The list above, which we quote, furnishes two excellent specimens of applicants, who, however worthy in other respects, are not at all deserving of aid from the public treasury. It is not necessary to specify these hospitals by name; many of their disqualifying conditions apply equally well to others here and in other parts of the State. One is an habitual parasite; the other is a perfect type of Professional Philanthropic invention.

In the first instance, the hospital is one of three distinct divisions of a corporation whose charter authorizes and empowers it to maintain the hospital; a home for the support of the aged, male and female, of a specified nationality; and an institution for the maintenance and education of a religious order; and to receive donations, legacies, etc., etc., and apply the same to the *general* corporate purposes without distinction. The institution, unquestionably, is sectarian. Its by-laws require all business to be transacted and records to be kept in a foreign language. Its patronage is very extensive among a well-to-do class of people. It makes ample provision for its own support by a system of initiation fees, membership dues, fees from patients, and subscriptions of individuals and associations, and, quite recently, it has incurred the displeasure and distrust of the profession by advertising in the daily papers to establish and conduct the vicious "contract" system, which has so impoverished the medical profession abroad. This institution, which is sectarian, which has sufficient means to build, endow and support from a common income, two other institutions of considerable magnitude but entirely foreign to the purposes of a hospital—this *private* hospital has begged and during a very few years obtained alms from the State amounting to thousands of dollars, and for no reason comprehensible outside of the politician's consulting room. Having secured money so easily, the institution naturally comes back for more. We violate no confidence in stating the accepted opinion that, once on the State beggar's list, an institution will never be refused absolutely (or deservedly), so long

as there remains any of the people's money or credit.

As for the second outrage upon decency, the Professional Philanthrophy Pudding, the explanation is very simple in view of the customs of political courtesy. But the premeditated misprision of legislative duty is enormously aggravated when to ineligibility there is added the fact that the applicant is the embodied presentment of Professional Philanthropy.

It is not possible to give a definition of Professional Philanthropy which would be, at once, brief and sufficiently comprehensive. One conception would be, the art of requiring reputation for the love of fellowman and for devotion to his relief and salvation, by appropriating to self all credit for the results of efforts wholly of others who are too modest to blow their own trumpets and whose work can be patronized and applauded without any self-sacrifice or personal expense. But this is merely a single phase. Professional Philanthropy is a congeries of characteristics or traits, no one of which is peculiar to this form of mental and moral obliquity, and all of which rarely or never occur in the person of any one individual Professional Philanthropist. There is, however, one constant feature—the absolute lack of self-sacrifice. It is the constant predominating of this quality which characterizes all genuine philanthropy. Herein is the distinction between philanthropy and Professional Philanthropy.

Perhaps a sketch, drawn from life, of an eminent Professional Philanthropist will give the best definition of the term:

Male, in the prime of life; moving in the swellest social circles—the froth; a pillar in the church on Sundays; rated high financially; director in several of the solid moneyed corporations of the community; wealthy by inheritance, by business ability, and by acquirement; prominent in public affairs not requiring personal expense; manager, trustee, governor, or what not, in a variety of charitable institutions; controlling the affairs of at least one richly-endowed charity (including its finances, cash, bonds, stocks, and real estate, its work, its policy, its officers, its elections, and even the opinions of the boards of alleged managers). So far one might be in fact philanthropic save for a little too much self-consideration, but now the modifying qualities which distinguish the Professional Philanthropist obtrude themselves very offensively. For instance, the founder and endower of an institution, when devising his entire property in trust for the realization of his efforts to benefit the unfortunate and needy in the field of his life work, evidently took it for granted that the men he chose to carry out his intentions were as humanely disposed as himself (or should be, since it would cost them nothing but a little thought and time to do a great amount of good), for he made no provision for paying his trustees' salaries for their services, but specifically desired that such service be without remuneration. It required an amendment to the charter to accomplish it, but Professional Philanthropy set a cash value upon its name and service and secured the necessary change, at least for some offices, and then secured the offices. In the course of financial affairs, securities depreciated and some retrenchment became necessary. This was easily accomplished in such manner as employers are accustomed to reduce expenses in business by retrenching the incomes of subordinates and employees. So that, as the matter now stands, Professional Philanthropy, working possibly twenty-four hours during the year, has a money value far in excess of that of the services rendered by the practical executive of the whole institution, who works twelve hours a day three hundred and sixty-five days, and averages perhaps four hours a night for three hundred and sixty-five nights, and who bears the responsibility of the details

of management as well as the cares and worriment of the professional duties. Again, the "nominal" remuneration for shedding the light of his Professionally Philanthropic countenance on the sorrows and burdens of the unfortunates who come within range is munificent compared to the sum total given to all charities combined, so far as is discovered by the reports of the various treasurers made public. In the few instances where it occurs, its name is displayed in bold faced type, so to speak, and leaves the impression that one dollar wrung from Professional Philanthrophy is a greater triumph for good than one thousand dollars dropped from the free hand of Generosity.

A lawyer might explain away this suggestive fact, but he would find it hard work to rub out the adjective, Professional, from the degree of the Philanthropist who regards the beneficiaries of a trust as a species of mankind peculiar, grading socially lower than the swiftly changing retinue of servants in his own home, and as singularly unsuited for any comforts or conveniences not found in the back kitchen or stable loft and, more than all, treats them so.

He is a Philanthropist for what there is in it, not for what he puts in it.

Four or five such humanitarian, sassociating themselves with one philanthropist for the sake of the money necessary to start with, incorporate and launch a new charity in the shape of a hospital. The inspiration of the act is generally found to be a desire to provide occupation for some incompetent but dependent relative or other social equal, whose light otherwise must be hidden under a tea-cup. The confidence manifested will be found due to access to the public treasury provided with the assistance of some one who has been there before, and who is bound to see that they get there too. Once successful in reaching this source of support, Professional Philanthrophy has demonstrated its power for doing good, by providing subsistence for at least one incompetent, who otherwise might be thrown for support upon the county authorities. This demonstrates not only a kind heart, but a level head, for it is evident that it is more economical for the State to support a pauper than for the County to do so, the tax being less per capita.

This is a brief and crude summary of the character of a protege of Professional Philanthropy which already has disposed of scores of thousands of the public's dollars without rendering any visible consideration.

If the Legislature is able to overcome its blind devotion to political courtesy long enough to refuse an appropriation to this bottomless pit which can never be filled, either the Professionally Philanthropic sponsors will have to return more of their "remunerations" from charities to charity, or the long-felt want for which this hospital was provided will be found fully satisfied, the institution will lay it down to pleasant dreams, and suffering humanity will find in its closed doors cause for rejoicing that, in one instance, true philanthropy has finally triumphed.

Two Easy and Delicate Tests for Albumin in Urine.

Dr. C. Fouchlos (*Progres Medical*) recommends two new tests for albumin in urine, for which he claims utmost delicacy and absence of any possible fallacy.

1. Add to the suspected urine a few drops of a one per cent. solution of corrosive sublimate; in case of turbidity, add some drops of acetic acid. If the turbidity persists it is due to the presence of albumin.

2. Take 100 cc. of a ten per cent. solution of sulpho-cyanide of potassium, and mix with it 20 cc. of acetic acid. Add a few drops of this mixture to the urine. If albumin is present in small quantities, an immediate turbidity will ensue; if in larger quantities, a heavy white precipitate will appear.

ABSTRACTS.

"AURAL MASSAGE."

Laurence Turnbull, writing (*Med. News*) of its value in the treatment of various diseases of the ear, says:

"Aural massage," by alternately moving backward and forward the auricle with the opened and closed meatus, by the hands, with associate movement of the sterno-cleido-mastoid and occipital muscles, has been recommended and practiced for some time for the purpose of giving freedom to the membrana tympani when adherent and thickened, and with some benefit, also, in certain diseased conditions of the other parts of the ear. Another method is to open and shut the orifice of the canal by pressure on the tragus at its lower part, closing the meatus with the thumb or forefinger; the force may be increased by greasing the canal with vaseline alone or with medicated ointments or oils. There is also a more perfect method of massage, by condensation and rarefaction, by means of the instrument of Siegle, which has for years been employed in the examination of the membrana tympani. It resembles the ordinary hard-rubber speculum, but is more elongated, and its outer opening is fitted with an oblique plate of glass. A small nipple projecting from its side marks an opening to which is attached a small rubber tube ending in a mouthpiece. The instrument is used by inserting the small specular end into the meatus as far as possible (best covered with a section of rubber tubing and anointed). The mouth is applied to the end of the tube, or a small syringe, to exhaust the air, may be employed, or else an elastic valve bulb can be used; through the glass the movements of the membrana can be watched. All these plans were very unsatisfactory and could not be graded until Dr. Chas. Delstanchè, of Brussels, gave us two improved instruments, only a brief description of which I can give at this time, as they require cuts to fully illustrate them.

Delstanchè's instrument for massage, or as he terms it "masseur," consists of a metallic tube enclosing a smaller tube of metal which acts like the valve of a syringe. The recoil of the valve which produces the aspiration and condensation is accomplished by a spiral spring between the valve and the bottom of the metallic tube. The inner tube is graduated in fifths, so that one may determine by a key the amount of power to be employed. Care is necessary in the use of the instrument for fear of rupturing the drum-membrane, causing a great deal of pain, a flow of blood and an interference with the operation. In order to better condense the air in the tube the nipple-like process is covered with rubber. It must then be withdrawn from time to time, but the to-and-fro motion may be kept up for some time to advantage, always examining its effects upon the membrana tympani. The other instrument is named by Delstanchè the "rarefacteur." It is provided with a double valve, and has an advantage over the other instrument in that, without removing the stop-cock, one may alternately condense and rarefy the air in the external meatus, or rarefy it alone. It is much more powerful, and with it we can rarefy the air in catarrhs of the middle ear and Eustachian tube, in which there is a sunken membrane, or break up adhesions between the membrana tympani and inner wall of the cavity of the tympanum, or after paracentesis of the membrane, when we have fluid products to be removed.

Several other instruments have been brought forth of late for the same purpose, differing in name, but all of them having the same object in view; they cannot be employed alone, but as an aid to other means, for although they are of value when properly applied by the scientific and aural surgeon, they are of limited application, and like all efficient agents can do harm as well as good.

One of the most recent of these instruments has been termed the "vibrometer," which combines massage by sounds, both mechanic and electric, with exhaustion or rarefaction, with a series of musical strings. The first instrument employed was like a violin; the second like a guitar;

the last in the form of a banjo. This latter instrument is termed a vibrometer. A medical friend made a series of experiments with the first one hundred cases* of tinnitus aurium and deafness, but only two per cent. were successful in relieving the patients, and my own efforts have been as resultless. Ten cases out of one hundred will be reported. These will be sufficient for our purpose; they have not been selected but are like the ordinary cases that present themselves to the aurist every day for treatment.

The following are the rules for the use of the instruments employed, after making a careful diagnosis, and correcting, as far as we are able, defects that would interfere with the successful use of the instrument:

The length of the sittings is from five to twenty minutes, and the number two a week. For tinnitus, like the ringing of bells, the chirping of insects, the singing of birds, the sound of escaping steam, try the highest notes of the instrument, say twenty thousand vibrations a second. Draw the fine musical string of the vibrometer very tight, and shorten it with a clamp to obtain high notes; to obtain low notes elongate the strings. When the tinnitus gives a deep sound like a sewing machine, the humming of a saw-mill, and for all low-pitched sounds, use the low-toned strings, say of forty vibrations a second, and the pounding arrangement with the so-termed exhausting wooden plate. When the tinnitus is high, increase the vibrations up even to thousands. When the right pitch has been obtained the patient should only hear one sound, and the noises which he hears continually should be gone. In the case of a physician who suffered with constant tinnitus he was able by the use of the vibrometer to get rid of it, but he required the constant use of the instrument, as the tinnitus would return.

There are three other methods now in use for stimulating the deaf ear, all of which I have examined and employed alone with no better success: namely, the vibrophone, audiphone, and the musical-box and pressure-probe.

When "very deaf" patients cannot bear rough, grating, or shrill sounds, a pleasant agency is a small music box (Cohen), on which is placed a cushion, and upon this the patient places the deaf ear, so that contact with it occurs every day for ten or fifteen minutes; this is to increase the mobility of the ossicles. Lucae has recommended an apparatus for increasing the mobility of the auditory ossicles in cases in which there is stiffness (ankylosis) accompanying a form of deafness in which the patient is not able to hear general conversation, and Rinne's experiment yields a negative result. It consists of a steel rod, or pin, at one end of which is a small conical depression for the reception of the short process. The pin goes through a conducting tube, and its other end touches a spiral spring fixed into the handle of the instrument, and yielding readily to pressure. In employing this "pressure-probe," or feathered sound, the patient's head is first fixed and the instrument introduced under a good light along the upper wall of the auditory canal toward the short process of the malleus. The latter is received in the hollow at the inner end of the probe, and sharp taps are then made against it; at first, one or two only, later, up to ten, to be repeated if the result is favorable. Lucae asserts (Gruber) that after the employment of this instrument the air-douche may be used with success. As almost all patients suffer pain on the slightest touch with a fine probe, a solution of cocaine must be employed prior to the operation. The tip should also be covered with delicate oilskin, else it will be found that excoriations will be produced. This operation is only justifiable in the hands of the competent aurist who is perfectly familiar with the parts. Improvement, which in some cases takes place after this painful operation, cannot be relied upon without treating the middle ear at the same time.

*Private statement; the cases are not yet reported.

To Lubricate Catheters.

The Paris correspondent of the Lancet says that Professor Guyon, of the Necker Hospital, uses the following formula:

Bichloride mercury	gr j
Glycerin	āā 5ij
Water	
Powered soap	5iv—M.

This ointment is claimed to be unirritating to the urethra, and to possess greater lubricating power than either oil or glycerin—*Virginia Medical Monthly.*

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

January 9, 1895.

Drs. Daland and Robinson presented a

A CLINICAL STUDY OF THREE CASES OF SPONTANEOUS HÆMOPHILIA IN BROTHERS.

(See page 376.)

DISCUSSION.

DR. FREDERICK P. HENRY: Isolated cases such as have been described to-night are rare. It is generally possible to demonstrate the hereditary character of this affection, which is in reality the most hereditary of all diseases. There is in Switzerland a family of which the history has been traced for about three hundred years, and during this period there have been bleeders among the male descendants. The females, as a rule, remain exempt, the disease being transmitted through them to their male children. They are not necessarily exempt. Virchow believes that one woman may be affected to seven men in families of bleeders.

There are certain peculiarities about families of bleeders, and one is their fecundity. The decimation in numbers, caused by fatal hemorrhages, is made up to a certain extent by the fecundity of the females. Dr. Daland stated that in this case the mother was one of ten, and there have been counted two hundred and four children in twenty-one families of bleeders, giving a large percentage for each mother.

The disease has been supposed to be more prevalent among certain races, especially the Israelitish race. I think, myself, that this supposed predisposition would disappear if all infants were subjected to the traumatism which is an integral part of the Jewish ritual.

Symptoms. These were cases of spontaneous bleeding, but this does not remove them from the category of hæmophilia. It has been stated that the spontaneous form is more intractable than the traumatic variety, but I am inclined to doubt the truth of this statement. Dr. Daland referred to the flushing of the face prior to an attack of bleeding; this is an old observation. Signs of cerebral congestion have been repeatedly observed in these case. It is manifested not only by flushing of the face but by subjective signs, especially tinnitus aurium, and in the days in which bleeding was practiced phlebotomy was performed at this stage, and it is stated that the incision into the vein was not attended with severe bleeding when made in this prodromal stage of the affection.

The rheumatoid symptoms are interesting. They have been observed in nearly all of these cases, and have been attributed to hemorrhage into the joint, but in no case with which I am acquainted has blood been found in the joint post-mortem.

There is one affection that has been confounded with hæmophilia, but is not likely to be in these days, and that is leucocythæmia, when attended with the subcutaneous extravasation of blood.

The prognosis after the age of twenty-one is good. The tendency to obstinate hemorrhage seems to diminish after that period.

The cause of the affection, I believe, is to be found in the blood vessels rather than in the blood itself, and yet I make that statement with a certain reserve, because the treatment which has been found most satisfactory rather contradicts that assertion. Microscopic changes have, however, been found in the arterioles, consisting mainly in wasting or absence of the middle muscular tunic of the vessel. Vasomotor influences undoubtedly play their part in bringing about an attack. This is shown by the flushing of the face, which so often precedes an attack, and also by the fact that the attack may follow emotional excitement.

The treatment is both prophylactic and curative, and one element is undoubtedly

climatic. Dr. Daland's patient improved when removed from a high altitude to a lower. In recorded instances patients have been free from attacks in southern Europe, while they had repeated attacks in northern Europe. The disease is essentially one of cold climates.

There is one remedy which has been employed for nearly one hundred years.

This was recommended by Dr. John C. Otto, of this city, who was one of the first to write on the subject of hæmophilia. America deserves the credit, and has been given it, of having been the first to demonstrate the hereditary character of this affection, and one of the earliest writers on the subject was Dr. John C. Otto. His paper is to be found in the *Medical Repository* for 1803. He employed the sulphate of sodium in repeated purgative doses, and claimed that it was efficacious, especially in the early stage of the affection. Ergot and turpentine have also been used. The latter has been efficacious in quite a number of cases. The hydrastis canadensis has also been successfully employed. Probably the best of all remedies is the transfusion of entire blood, and the amount required to control the hemorrhage is exceedingly small. A few ounces will sometimes suffice. It is supposed that the entire blood furnishes to the circulating fluid the element in which it is deficient. This is supposed by Hayem, of Paris, to be the hæmatoblasts, or blood-plaques, which are so prominently concerned in the act of coagulation.

Dr. Thomas D. Dunn, of West Chester: I have long been interested in the subject of hæmophilla, having had knowledge of such a case when a schoolboy of thirteen. The more that I have studied hæmophilla the more have I been convinced of its hereditary nature. In many cases where the disease is supposed to have developed spontaneously in families, further investigation may show that the disease existed in previous generations. Sometime ago I reported to the College of Physicians a case of purpura hemorrhagica in a boy who had had several large hemorrhages, one from the opening of an axillary abscess and another from the extraction of a tooth. I exhibit a photograph showing the appearance on the eight day of the attack of purpura.

Hæmophilia is a disease which has been recognized for a great many years. The first record is by an Arabian physician, in 1107. Isolated cases then occurred from time to time, especially in the Jewish race, but later investigations show that it is largely an Anglo-Germanic disease.

As to the hereditary character of the disease, Grandidier, in 1855, collected 213 families in which there were 631 subjects of the disease. The 120 cases that I collected occured in 37 families. Immermann collected 19 cases in 6 families, making in all 770 cases in 256 families, or about 3 bleeders to every family. In 1883 I reported a remarkable family of bleeders under the name of the Worrall-Garrett famiiy. Some members of this family I was unable to find. Later I visited a lady in Delaware County who gave me a letter describing a hemorrhage which her father had had following the extraction of a tooth. This was in 1827, and an account of the case was published in a Philadelphia journal in Jannary, 1828. Although two generations had been skipped, the disease again appeared. There were four sons, and three died of hemorrhage. The one that remained was not a bleeder. This was the grandfather of the child whose picture I have shown. The father never showed any tendency to bleeding, but another child in the same family has had many violent hemorrhages, both spontaneous and traumatic.

Dr. Henry referred to the frequency of the affection among males. I think that about 8 per cent. of the patients are females. One remarkable feature is that the children of non-bleeding men and women are more apt to bleed than the children of bleeders.

The prognosis in young children is very grave indeed. Of the 16 deaths occurring in the families that I reported in 1883, 9 occurred before the eight year. Of the 212 deaths reported by Grandidier, 111 occurred before the seventh year. This shows the remarkable mortality in the early period of the disease. It is equally remarkable how early the disease develops. Thirty-six of the 38 cases that I collected showed manifestations before the age of eight years.

Treatment. I think that no female in a bleeder family should marry, whether she is herself a bleeder or not. It seems that the bleeder brothers who bleed themselves

are less likely to transmit the tendency than the non-bleeding brothers.

The remedies usually employed in the treatment of hæmophilia have been referred to to night. I have never had an opportunity of trying cocaine. The tincture of the chloride of iron has been used with benefit. I am positive that I have seen benefit from the use of sulphate of sodium, and this agent has been found valuable by several German observers.

In regard to the surgical aspect one very remarkable point is, that very few serious hemorrhages follow major operations in these cases. There seems to be less danger from extensive than from trifling wounds.

Dr. Ernest Laplace: I saw a case of this kind in von Bergmann's clinic in Berlin. A man came in to have circumcision performed. The bleeding was free and hæmostatics were applied. Finally, sutures were employed, but the man finally died at the end of a week from the results of the hemorrhage.

Dr. De Forest Willard: I have had one unfortunate experience in a case of erosion of the knee, where the mother failed to inform me that there was any hæmophilic difficulty. The condition was apparently one of ordinary tubercular arthritis. At the time of operation I found the gelatinous material tinged red and some free blood in the joint; I also had great difficulty in controlling the hemorrhage. Bleeding occurred on the night of the operation and the following day, and continued until the child's death, a week afterward. Every method was attempted for its control, but proved ineffectual, as the oozing steadily continued. The mother afterward stated that she knew that the child bled easily, but had never heard of such a condition as "bleeder's disease." I have seen another somewhat similar case in a girl of thirteen, but which did not prove fatal.

Erigeron canadensis does not seem to have the same effect in these cases as in other forms of bleeding. For nasal hemorrhages I rely entirely on erigeron, and have not plugged the nares for years.

Dr. Judson Daland: I have been much gratified by the dull discussion on this interesting disease. A number of facts have been brought out that had escaped my attention. My own experience has been limited to the cases reported.

The observation of Dr. Robinson in regard to the hæmostatic action of cocaine is of great practical importance. The results in these cases seem to be more than a mere coincidence, and cocaine deserves a trial in subsequent cases.

It was on account of the great rarity of spontaneous cases that I made extensive inquiries as to the possibility of the disease occurring in former generations. I was able to inquire into the family history as far as the fourth generation, but failed to discover any similar cases. It is, of course, possible that some more ancient ancestor may have transmitted the disease, and these cases would, therefore, be examples of indirect atavism.

I was interested in the vasomotor symptoms of hæmophilia. These were so distinct in the case under discussion that the father was able to predict a hemorrhage from the flushed condition of the face and attendant nervous excitement. This fact perhaps indicates one of the methods by which hemorrhage may be initiated. The capillaries and smaller arterioles may be the seat of congenital changes rendering them usually vulunerable, and the mere act of dilatation may, in some cases, be sufficient to cause rupture.

The prognosis increases in favorableness directly as the years. This boy having lived to the age of thirteen years, we gave a guardedly favorable prognosis.

As regards the pathology of this strange disease, Dr. Henry is inclined to think that the chief factor is a morbid state of the walls of the blood vessels. The evidence points strongly to a curious fragility of the blood vessel wall. This particular case proves that we have a second factor, namely, that the blood has a diminished power of coagulation.

The suggestion with regard to transfusion is an important one, and this should be resorted to in obstinate casses.

In regard to the oil of erigeron, I would say that it was employed, but proved valueless.

This case showed so prominently the symptoms of rheumatism that I should like to mention a differential point of importance, and one that is new—namely, that in rheumatism we have uniformly, whether the rheumatism be acute or chronic, a remarkable increase in the coagubility of the blood. The almost total absence of coagubility noted in our patient

would, therefore, be of importance in excluding rheumatism and strengthening the opinion that the joint affection was hæmophilic in nature.

Dr. James C. Wilson: In a disease so rare as this it is desirable that personal experiences, although not very exact in detail, should be brought forward. In 1872 I saw a young man suffering from hæmophilia in the Pennsylvania Hospital. He had been carrying a crock and had tripped and fallen on it in such a way that one of the fragments struck him in the face, passing in front of the incisor teeth, cutting the mouth, and making a small wound. No arterial twig of any importance had been divided. He had bled for some days before coming into the hospital. He was taken to the surgical ward and the ordinary methods for the control of hemorrhage employed. I have a vivid recollection of the surprise and disappointment of the staff at the failure to control the oozing. Various arteries of supply to the part were in succession ligated, with the result that the oozing continued and fresh oozing from the wounds was added. After several days, transfusion of blood was employed, but it was entirely without success, and within twenty-four or thirty-six hours the patient died.

Headaches in Heart and Kidney Diseases.

Pulv fol digit	gr 1
Antipyrin	gr 10
Caffeine	gr 1-5
Sod benzoat	gr 2
Cocain hydrochlor	gr 1-5
Pulv quin	gr 1
Pulv opii	gr 1-5
Glycerini, q. s. ut ft. pil. 50.	

Sig.: 1 to 5 to be taken daily.

—*Medical Times and Hospital Gazette.*

Painless Method of Treating Varicose Ulcers.

Dr. T. Will Summers writes to the *Medical Record* of a new and painless method of treating varicose ulcers. He first applies thoroughly a solution of bicarbonate of soda. After this has been done, a solution of methyl violet is applied, and it is allowed to dry. The methyl solution must be thoroughly put on, so that the base and edges are touched by it. When dry, a piece of absorbent cotton is placed on the ulcer, or, if more exist, on each one, and a Martin's rubber bandage over all. This procedure is to be repeated every morning. In the way of medication, potassium iodide in ten to fifteen grain doses, three times a day, should be administered. The author speaks of a case which recovered in six weeks, and as the bandage and internal medicine has been used with no avail, he concludes that the application of the methyl violet should be credited with some portion of the praise due for the rapid recovery.

For Amenorrhœa.

The following (*Pract.*) promises well:

Hydrargyri chloridi corrosi	gr. ¾.
Sodii arseniatis	gr. j.
Ferri sulphatis exsiccatæ	gr. xxx.
Potassii carbonatis	gr. xv.
Extracti nucis vomicæ	gr. v.

M.—Divid. in pil. xxx.

Sig.—One pill to be taken before each meal.

Application for Condylomata.

Acidi Tannici	Partes æquales
Hydrargyri Subchloridi	" "
Amyli	" "
Misce et fiat pulvis	

Sig.—To be dusted on the affected parts.

—*The Practitioner.*

Excoriations in Children.

Pritchard uses:

Salicylic acid	gr. viii.
Bismuth subnitrate	℥ ii.
Starch	℥ iss.
Ointment of rose	℥ i.

Hemorrhagic Chlorosis

Dr. Ch. Ligeois prescribes:

Sulphate of iron	gr. 38.
Extract of hyoscyamus	gr. 15.
Alcoholic extract of hydrastis canadensis	gr. 78.
Powdered licorice root	gr. 78.

Make 100 pills.

S.—Two at each meal, both during and between the menstrual periods.

Antiseptic Powder.

Hydrarg. chlorid. corros	gr. 1-5.
Ac. borici	℥ i.
Ac. tannici	gr. x.
Sac. lactis	ad ℥ ii.

Mix sublimate gradually and thoroughly with the sugar, then add the rest. Useful where iodoform is usually employed.—*New York Medical Journal.*

A Good Cough Mixture.

The following appears to be highly recommended (Miss. *Med. Mo.*):

Ammoniæ muriat	℥ iiss
Spts chloroform	♏ vj
Tr opii camph }	āā ♏ j
Tr hyoscyami }	
Syr tolu	q s ad ℥ iv

Sig.: Two teaspoonfuls in water every two, three or four hours.

THE LIBRARY TABLE.

BOOK REVIEWS.

A SYSTEM OF LEGAL MEDICINE. Volume II.

The first volume of this work has received notice in these columns. The second and concluding volume is now before us.

All the articles are written in the light of recent research and bear the stamp of painstaking, thoughtful and accurate work.

Few better books, old or new, on legal medicine, books more valuable to the medical profession have issued from the press.

Certainly there will be differences of opinion on many subjects discussed, but this fact will not detract from the general merit of the work.

The second volume, like the first, covers a variety of subjects of great interest and value to the profession, the more important of which are:

"Duties and Responsibilities of Medical Experts."

"Insanity in Its Medico-Legal Bearings."

"Mental responsibility of the Insane in Civil Cases."

"Insanity and Crime."

"On the Relations of Mental Defect and Disease to Criminal Responsibility."

"Accident Cases."

"Mental Distress as an Element of Damage in Cases to Recover for Personal Injuries."

"Feigned Diseases of the Mind and Nervous System."

"Birth, Sex, Pregnancy and Delivery."

"Abortion and Infanticide."

"Surgical Malpractice;" and other articles of equal merit.

The work is an excellent one for both the old and the young of the profession. The second volume also contains a concise epitome of the laws of the different states which relate to the general care of the insane. Published by E. B. Treat, 5 Cooper Union, New York City. R. P.

A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE. By Austin Flint, M.D., LL.D. 7th Edition. Revised by Frederick P. Henry, A.M., M.D., Philadelphia. Lea Brothers & Co. 1894.

In one respect especially does Austin Flint surpass not only the writers of his own generation but also those of our day, and that is in accuracy of description. So long as medicine continues what it still is, his work cannot be excelled. However, since his day medicine, as well as the other sciences, has been making tremendous progress, and it has been found necessary to add new material, and to describe as new diseases what were formerly regarded as being merely unusual manifestations of certain known diseases.

Here, there are new articles on Pulsating Pleurisy, Weil's Disease, Syringomyelia, Beri-Beri, Hereditary Chorea, Acromegaly, Raynaud's Disease, Leprosy, Influenza, Lithæmia, Rickets, Actinomycosis, Anthrax and Glanders.

The edition published in 1886, contained a chapter on General Pathology; this has been omitted from the present edition and Special Pathology is considered in its stead.

Instead of adopting the metric system which is now used throughout all countries, the old English system of weights and measures has been retained in prescription writing.

In spite of the additions and changes, the real charm of the old work has been maintained, and there is handed down to us clinical description, still bearing the stamp of the great writer, which will serve as standard for many a year to come. J. O.

A Case of Tobacco Deafness.

Dr. Pierre F. Spaink, of Apeldoorn, Holland, writes: "Among the poisons for the nervous acusticus, Politzer names tobacco as well as quinine, salicylic acid, morphine and chloroform. And also Dvorzak and Heinrich, who, under the auspices of Schroff, intoxicated themselves acutely by nicotine, enumerates dullness of hearing among their symptoms. The following case, in which the nervous data of the family are hemiplegia spastic infantilis of a sister and idiocy of a cousin may be of interest. J. P., aged 14, had become dull of hearing since four years; last summer he improved a little, but the next winter he deteriorated again, so that his family called him completely deaf. Inquiry learned that the left ear was nearly deaf, and the other one very dull of hearing. The membranæ tympani were normal. There was a slight catarrhus of the pharynx. No amblyopia. Sensorium intact. Pupil and patella reflexes present. Pulse without particularity. There was no loss of flesh or tremor, and all functions were normal. He smoked and chewed tobacco the whole day, so that the consumed quantity of tobacco, even at a rough guess, was not to be calculated.

"The severe presciption to use no tobacco at all, and to take much food, had the consequence that after three weeks he heard well again, which, after six weeks (February, 1894), still was confirmed. The boy, who had grown thicker meanwhile, in the beginning of May became dull of hearing again, and it was proved that he had chewed tobacco again during the last three weeks. New severe prohibition had the result that he now hears very well."—*Quarterly Journal of Inebriety.*

For Eczema.

Acidi salicylici	℥j.
Zinci oxidi	ʒiij.
Adipis lanæ hydrosi	℥j.

M.—Fiat unguentum.
S.—To be applied daily.

—*Provincial Medical Journal.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Cough Mixture.

Cough mixtures should be regarded as a relict of ancient and unscientific methods of practice, and as most of them do more harm than good, their employment should be relegated to well-merited oblivion

The sweeping denunciation of a time-tried, and, shall we say, fire tested remedy (?) apparently deserves some explanation, and as the season of the year is approaching when such preparations will be in active demand, some arguments against their reckless and indiscriminate use will be presented.

In the first place, cough mixtures do not benefit or improve the cough as we now understand a cough should be improved or benefited. True, the anodyne ingredient may lessen the tendency to cough, but opium or any of its preparations do harm by arresting the normal secretions, and thus the system becomes affected by the soluble poisons from the stomach and the intestine, to say nothing of the secretions retained by the kidneys, the skin, the pulmonary structures and the mucous membrane lining the upper air passages. When a person is enjoying fairly good health, he does not take cough mixtures as an agreeable pastime. No physician thinks of "bracing up" in a cold morning with a tablespoonful of cough mixture. If a man was varnished or painted all over, the elimination of poisons would be so interfered with that death would soon ensue, and this is substantially the effect that is produced by the usual cough mixture in general use. That patients who take cough mixtures do recover, will not be denied, but they recover in spite of the mixture; and it is a stubborn fact that such patients are always a considerable time in regaining their former health, simply because they suffer from the effects of toxic products taken into the circulation.

Some physicians favor a Turkish bath as a remedy for a bad cold, and in exceptional cases this plan works well; but it is not suited to many, for the reason that a bad cold is but the warning signal that the vitality of the organism has been reduced while the susceptibility to disease is increased. An able-bodied man accustomed to Turkish baths can stand one of these in case of a cold, but it is of more importance than the condition of the alimentary canal should receive the same or like attention. The danger is not all from without; it is probably greater from the alimentary tract than from the skin, and those who advocate the use of the bath, to be consistent, should at the same time insist upon the free use of a suitable saline.

In the second place, all successful (?) cough mixtures contain nauseants which tend to disorder the digestion; but were this effect is only temporary, no material harm would ensue. These nauseants, however, are now promptly eliminated, and when the patient would be in a fair way to recover, their insidious influences begin to manifest themselves, so that neither the physician nor patient can understand why convalescence is prolonged. Cough mixtures are doomed; eventually they will be damned.

In the third place, cough mixtures contain more or less saccharine substance, usually sugar in the form of sirup, originally incorporated probably to make a nauseating draught palatable; but it is now well known that the introduction of sugar into the stomach, when in an unhealthy condition, is most objectionable, inasmuch as it starts up fermentation, produces body heat, and even by the wildest stretch of the imagination has no distinctly beneficial effect upon the cough. Let us have a new regime for the winter campaign.—*Editorial in American Therapist.*

Remedy for Insect Stings.

A paint for the stings of insects, in which ammonia is kept in close and prolonged contact with the affected part is prescribed as follows:

Aq. ammoniæ.....	mcl.
Collodion.....	gi. i.
Acid salicylici.....	gr. v.

A few drops to be applied to each bite or sting.

—*Medical Chronicle.*

Pathology of Tetany.

Dr. John T. Carpenter, of Pottsville, Pa., read a paper before the American Medical Association in June last upon the above subject. After a short historical sketch, in which he credits Dance with having first noted the disease, he defines it as "a nervous disorder, evidenced by tonic spasms of an intermittent character, which may involve any or all of the groups of voluntary muscles from the extremities to the jaws, and which may be reproduced at will, during a period of intermission, by compression of the nerve trunks of great vessels which supply the muscles which have been involved in the spasm." The pathology of the condition has been almost completely unknown, mainly, perhaps from the rarity with which a fatal termination is seen, but also because of the "various forms under which it has been observed to appear, and the various conditions and circumstances which attend its development." Four forms are spoken of by the writer as having been established, viz.: (*a*) Rheumatic, or epidemic; (*b*) a chronic form, due to some debilitating condition—*e g.*, prolonged lactation; (*c*) gastric, due to dilatation of stomach: (*d*) surgical, following removal

of thyroids. The first two are very seldom fatal, whilst the last two are commonly so. Surveying the conditions under which tetany develops, we find that they present one feature in common, viz., the opportunity for septic infection. "Tetany, as a rule, follows upon such diseased conditions of the system as are observed to produce morbid discharges from mucous surfaces whose absorption is known to cause symptoms in remote parts of the body, due to the circulation of septic poison," and, summing up, "In all cases of recorded observations of morbid processes antecedent to tetany, a probable sepsis may be inferred, and no other cause common to them has, so far, been discovered. It is, therefore, logically necessary to assign the causation of tetany to this fundamental peculiarity as the antecedent factor, and to consider tetany, not as an independent disease, but as a disorder consequent upon some one of those diseases which generate septic poison."—Abstract of paper as published in *Journal of the American Medical Association.*

Tricophytosis.

In experiments Du Castel found that the following formula answered best in treating this disease:

Chrysarobin	gm 10 to 25
Salicylic acid	gm 5
Ointment of styrax	gm 5
Ichthyol	gm 5
Simple ointment	gm 5

—*Union Medicale.*

SURGERY.

Pseudo-Puerperal Infection Due to Colon Bacillus.

From three observations by the author (Aug. Dumont, *Archives of Gynecology*) and in the clinic of M. Budin, the author concludes as follows:

1. There exists a pseudo-pueral infection of intestinal origin.

2. The etiology is the alteration of the intestinal mucous membrane from pressure of the gravid uterus, an accumulation of feces causing a stasis and infiltration of the intestinal walls. This alteration permits the colon bacilli to pass through the walls into the pertoneal cavity, causing an infection which is perhaps unrecognized under the mask of puerperal infection. The alteration consists in desquamation or roughening of intestinal mucous membrane, thereby making the advent of the bacilli easy by removing nature's barrier.

3. The symptoms vary considerable. In general, the fever appears after normal labor, followed by obstinate constipation. In ten to thirteen days the "explosion" occurs—fever 39° to 40°, pulse 120 to 130, the countenance drawn, nose pinched, the skin cold, the tongue coated, the appetite lost, and the breath fetid. Intelligence is lowered. There is pain in the region of the cæcum and the colon. Palpation may reveal a mass of considerable size, depressible, having the consistency of mastich, against the side of the uterus. By palpation the uterus may be separated from this mass. In some cases palpation reveals nothing.

Vaginal examination reveals the absolute integrity of the uterus and the cul-de-sac. The progress of the disease is variable. When there is a light infection a purgative causes the disappearance of the menancing symptoms. When the infection is profound it may continue several weeks; not infrequently ends in death.

The treatment, above all, should be prophylactic. The old custom of administering a cathartic to all patients at confinement is recommended. During pregnancy, mild laxatives or enemata should be systematically followed. On the first appearance of symptoms of this infection a brisk purgative should be promptly given. The classical intestinal antiseptics should be given; the diet, milk. Under this regime most cases recover.

Black Eye.

There is nothing to compare with the tincture or strong infusion of capsicum annum mixed with an equal bulk of mucilage or gum arabic and with the addition of a few drops of glycerin. This should be painted all over the bruised surface with a camel's hair pencil and allowed to dry on, a second or third coating being applied as soon as the first is dry. If done as soon as the injury is inflicted, this treatment will invariably prevent blackening of the bruised tissue. The same remedy has no equal in rheumatic sore or stiff neck.—*Ex.*

An Addition to the Technique of Major Amputations.

Crede (*Arch. f. Klin. Chir.*) relates his experience in twenty-two major amputations which he had done within the past two years, and in which he obtained healing by true primary union in two-thirds of the cases. In the other cases healing followed, after slight local sloughing, within three weeks, except in one case in which there had been gangrene and septic infiltration of the tissues; here healing followed after four and one-half weeks.

Contrary to the general custom, this author makes flaps composed of both skin and muscular tissues and uses neither drains nor sutures. After making the flaps and tying the arteries, he places the flaps in apposition, and holds them there by means of a moist gauze bandage, three inches wide, applied so as to exact a uniform pressure, using neither drainage tubes nor sutures. The difficulty in the method is the application of direct pressure to the surface of the stump, which he does sufficiently to hinder serous exudation and to prevent bleeding. If there chance to be points in which the skin surfaces are not in exact apposition, they heal more quickly than the tracts left by the drainage-tubes.

The method of applying the pressure is not difficult to understand. The bandage begins on the under-side of the stump, passes over the end, and is repeated until the stump is covered over; during this time the apposition of the skin edges can be observed through the thin bandage. These longitudinal turns are followed by circular ones covering in the stump; then turns, starting on the sides and passing over the end of the stump, are used, followed again by spiral turns.

The bandage remains in place from eight to ten days, when all the deeper portions will be found to have been healed. If pain or high fever show themselves, the author splits up the bandage, but does not remove it, covering it in with another bandage.

Treatment of Artificial Anus.

Chaput (*Archiv. Gen. de Med.*) records thirty-five cases of artificial anus and stercoral fistulæ which he has treated. After an exhaustive survey of these cases he has formulated the following conclusions concerning the treatment of this class of cases: He says that artificial anus can be treated by four different methods: (1) By the application of enterotomy, followed by obliteration of the fistula. (*a*) Enterotomy is indicated when the cases are uncomplicated and the aperture is easily accessible, together with a thin and long partition. When the spur is long and thin it is advisable to adopt Richelot's method, that is, section between two pairs of forceps and immediate suture. If, however, the spur is long and somewhat thickened, it is better to make the suture between to long pairs of forceps, which are allowed to remain in position. Enterotomy is contra-indicated when the spur is very thick or inaccessible, or when the aperture is closed by the mechanism of angular wounds. (*b*) After destruction of the spur, the stercoal fistula is closed. Small fistulæ are closed by lateral enterorrhaphy, during which operation the margins of the fistula are freely separated from their surroundings, and then united with two tiers of sutures, the peritoneum being opened or not according to the requirements of each individual case. In the case of large fistulæ lateral enterorrhaphy may be emyloyed, but the peritoneum should not be opened. (2) Resection is as a general rule contra-indicated, but when in the course of a lateral enterorrhaphy the intestine is easily friable and is largely lacerated it is necessary to resect the two ends and reunite them by appropriate sutures. (3) Longitudinal enterorrhaphy: When the enterotomy is for some reason contra-indicated, it is sometimes advisable to employ longitudinal enterorrhaphy without resection. This operation is done by making a circular incision in the skin around the artificial anus and opening the peritoneal cavity. The two ends are drawn out, a longitudinal slit is made in each, and then the margins of the slits of the same side are sewn together with sutures. This operation is indicated when in the course of a lateral enterorrhaphy considerable constriction is met with just below the lower end. When the intestine is very friable it is contra-indicated. (4) Entero anastomosis: Entero-anastomosis, followed by ligature of the two ends between the point of anastomosis and the stercoral aperture, is a simple, easy, and benigh operation. It is indicated when the intestine is very friable at the seat of the artificial anus, or when there is a considerable constriction of the bowel in the neighborhood of the external aperture, and also when the inferior end is obliterated at the level of the artificial anus.

Treatment of Spasmodic Torticollis.

In discussing the operative treatment of spasmodic torticollis, in the *American Journal of the Medical Sciences*, Drs. Maurice B. Richardson and George L. Walton, of Boston, draw the following conclusions:

1. Palliative treatment, whether by drugs, apparatus, or electricity, will rarely prove successful in well-established spasmodic torticollis.
2. Massage may prove of value in comparatively recent cases.
3. Resection affords practically the only rational remedy.
4. Operation on the spinal accessory nerve may afford relief, even if other muscles than the sterno-cleido-mastoid are affected; on the other hand, the affection previously limited to the sterno-cleido-mastoid may spread to other muscles in spite of this operation.
5. No fear of disabling paralysis need deter us from recommending operation, as the head can be held erect even after the most extensive resection.
6. The most common combination of spasm is that involving the sterno-mastoid on one side and the posterior rotators on the other, the head being held in the position of sterno-mastoid spasm with the addition of retraction through the greater power of the posterior rotators.
7. It seems advisable in most cases to give preferenoe to the resection of the spinal accessory as the preliminary procedure.

Ichthyol in Fissures of the Anus.

Van der Willigen warmly commends ichthyol in the treatment of fissures of the anus (*Journ. de Med. Monatshefte fur Praktische Dermatol*). The pure drug is introduced into the anus by a brush. The contraction of the sphincter forces this into all the folds of the mucous membrane. Little pain is excited. Treatment should be repeated daily. This patient is given liquid diet and occasionally castor oil. The first patient, who had previously been treated by every means short of operation, was cured in eight days, the other three in two or three weeks. One had already been subjected to operation without benefit. There was no recurrence.

OBSTETRICS.

On the Treatment of Abortion by the General Practitioner.

After a discussion of the causes and diagnosis of abortion, the prophylactic treatment is outlined. Underlying causes, in which are especially mentioned chlorosis, abnormal fixation and laceration of the cervix, indicate the direction in which therapy should be applied.

Unavoidable abortions may be considered in three classes:

1. As beginning abortions. If the process be not spontaneously accomplished the placing of a tampon is indicated, and if necessary the manual removal of the fœtus.

2. As incomplete abortions. Here the removal of placenta and membrane should be thoroughly accomplished with the finger introduced sufficiently high in the uterus to sweep the whole wall. The use of instruments is not indicated. Dilatation of the cervix may be accomplished by introducing within it gauze that shall act as a tampon, and the subsequent employment of Hegar's dilators. If the os is patulous, narcosis is not necessary.

3. Complete abortions followed by hemorrhage. Here commonly the dull curette is to be used, but not always necessarily. On the contrary, a dietetic treatment with the use of the proper drug—ergotin—will not infrequently suffice.

After every operation an antiseptic, intrauterine douche is demanded, and so much the more if there be fever.—*Dr. Czanpin. (Berlin: Boas and Hesse).*

Cold Bathing During Menstruation.

Cold bathing during menstruation is a beneficial measure, provided women accustom themselves to the treatment by bathing every day for at least eight days before the arrival of the period, when they can continue during the menstrual flow without any danger. In the case of a very anæmic girl in whom this treatment was instituted it gave most satisfactory results. Houzel, before the recent Boulogne Congress, held that cold salt-water baths facilitate the menstrual flow, increase the duration of genital life, and likewise increase fecundity in a remarkable manner.—*Doctor Depasse, in Gazette de Gynecologie.*

Photographing the Womb.

A swiss physician has described a method of dilating the uterus by means of tents, so that by the use of a mirror a perfect view may be obtained of the interior of the organ. Not content with this, however, he is unselfish enough to desire to obtain photographs of the uterine interior in various diseases of the organ. The future of woman is sad indeed if now her womb must not only be felt of, sounded and measured, but photographed as well.—New York *Polyclinic.*

Pigmentation in Amenorrhœa.

Lawrence (Bristol *Medico-Chirurgical Jour.*) reports the case of a girl suffering from amenorrhœa with pigmentation. This became so marked as to suggest Addison's disease. She was treated with wine of iron, 1 drachm, and Fowler's solution of arsenic twice daily, burgundy in moderation, careful diet, the addition of milk, and her life regulated in accordance with general hygienic principles. This resulted in complete cure after many months.

The Decline of the Pressary.

The *Lancet Clinic* says editorially: "No one invents a pressary nowadays in strange contrast to the time when scarcely a man prominent in the practice of diseases of women did invent one." One may conclude from this that either all available pessary devices have been invented or that the use of the pessary is to be discouraged.

It is the latter view that Dr. J. G. Blake holds in a communication of the Obstetrical Society of Boston, April, 1894; his alternative for the pessary is of course surgical procedure. His complaint is more of the abuse than the use of the pessary, although he quotes Fritsch, a German writer who declared that he had spent ten years in learning the treatment by pessaries and considered it the most difficult in the whole range of gynecology, and that it is ealser to perform a laparotomy than to apply an accurately fitting pessary.

The same author criticises their use, declaring that the pessary heals palliatively, but injuries definitively; for it distends the fornix vagina so enormously, that even after it has been worn for years, a cure is not to be hoped for. On the contrary, retroflexion of the uterus returns after the removal of the pessary. The longer the uterus has been displaced the longer the time necessary to enable the reflexed ligaments to return to a normal condition; and a few days have been sufficient after its withdrawal to have the uterus fall back into its old position.

Among the means for obtaining permanent cures, Blake mentions narrowing the vagina; pregnancy following by prolonged rest in bed; dilating and curetting; and shorteneng the round ligaments. The first, he says, is only called for in complete prolapse, where no instrument, without external support, will keep the uterus within the vagina, but where it can be accomplished by narrowing the canal and the outlet; these cases are comparatively rare. The operation of dilating, curetting and packing is particularly adapted to the cure of anteflexions, and to the removal of enlargements which attend all forms of backward displacement. The combined dilating, curetting, and Alexander, is to his mind, the true solution up to date of the vexed problem of backward displacements.

Ventral fixation, by opening the abdomen, and by various other methods (the vaginal, for instance) of fastening the uterus, had

been advocated by many writers. He sees no advantage in them over the simple, harmless and in most cases effective operation in proper cases, and of dispensing with pessaries.

He thinks no one has yet devised a simpler, less dangerous or more effective measure for the emancipation of women from the wearing of pessaries than the two operations of dilating and curetting, and Alexander.

[In spite of the craze for operating, a skillfully adjusted pessary serves an excellent purpose in some cases.—*Ed.*] *Western Med. Reporter.*

Profuse Menstruation.

The Canada Lancet contains an able article on this subject by Dr. Charles P. Noble, who, after a thorough discussion, offers the following:

Conclusions:—1. Menorrhagia is young virgins is usually functional, due to disturbances in the vaso-motor nervous system or to relaxation of the tissues, in general caused by the rapid growth which at times takes place about the time of puberty. Because of its pathology menorrhagia in young virgins is usually curable by general treatment.

2. Menorrhagia occurring in young childbearing women is usually due to some mishap in connection with pregnancy or parturition, such as the retention of products of conception, laceration of the cervix or perineum, retro-displacement of the uterus, sub-involution, inflammation of the uterine appendages, and pelvic congestion. Menorrhagia in this class of women is curable. It usually requires local treatment of an operative nature. When due to sub-involution and malpositions of the womb, operation is unnecessary.

3. Menorrhagia in women approaching the forties, and in those who are older, is usually due to gross diseases of the uterus, such as fibroid tumors, polypi, adenoma, or malignant tumors. Menorrhagia occurring in this class of women, except when due to advanced malignant disease, is curable, but almost invariably requires operative treatment applicable to the disease present in the particular case.

4. As memorrhagia is a symptom and not a disease, an exact diagnosis is requisite in every case. With the exception of young virgins it is desirable that a physical examination of the pelvic organs be promptly made. The importance of this examination is the greater with the increasing age of the patient. Special considerations should influence the practitioner to postpone the local examination in the unmarried, unless it be reasonably certain from the symptoms that gross local disease is present.

5. There is no treatment for menorrhagia *per se*. By general measures, such as rest in bed and the use of digitalis and strychnine and ergotine, pelvic congestion can be lessened, and in that way menorrhagia can be, at least in part, controlled; but it cannot be too strongly insisted upon that in every case of menorrhagia an exact diagnosis must be made, and the appropriate treatment addressed to the disease which is present.

DISEASES OF THE NOSE.

Zinc Sterate in the Treatment of Atrophic Rhinitis.

The author, Dr. Joseph F. Gibb, discusses the nature and general management of atrophic rhinitis, and concludes by outlining the treatment pursued at the Episcopal Hospital of Philadelphia, and the results obtained in fifty four carefully selected cases. The plan of treatment consisted of cleansing sprays, followed by stimulating applications, as usually recommended in the management of atrophic troubles. The cleansing was accomplished by spraying the nostrils with an antiseptic detergent solution (Dobell's Solution), followed by applications of a hydrogen peroxide on a cotton wrapped probe if the inspissated crusts were not otherwise removed. After the membranes were entirely free from secretions they were coated with a thin layer of powdered sterate of zinc containing 25 per cent. of europhen applied by meanns of a powder-blower.

Stearate of zinc has an oily feel when handled and has a peculiarly strong adhesiveness to mucous surfaces, thus exerting an influence for a prolonged period when applied to mucous surfaces. The drug produces an unpleasant effect when used in the nose, and nearly all patients claim that its use is very agreeable. Very satisfactory results were obtained in the cases treated at the Episcopal Hospital, three or four treatments in some instances being sufficient to eliminate the disagreeable odor as well as the formation of scabs. The patients were treated twice per week, and in the internal between treatments were instructed to use a cleansing solution made from Seiler's Tablets. In a total of thirty-two cases of atrophic rhinitis that remained under observation until discharged, the shortest time being two months, the longest eighteen months, there were twenty-seven in which there was a complete disappearance of crusts and odor. The author concludes by recommending sterate of zinc as a base for carrying stimulating applications, because of its simplicity of application, its effectiveness in relieving the distressing symptoms, and the comfort that it seems to induce.

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ORIGINAL ARTICLES.

ANGIO-SCLEROSIS.*

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This first patient appears before you, not because he shows an active condition of disease at present, but because he is one of a group of cases that I propose to present to you—a group manifesting very different symptoms, but all dependent on one and the same trouble, a vascular disease which we may term angio-sclerosis.

Various parts of the circulatory system may be involved. In one phase of the disease the veins alone are affected; in another the arteries and heart; in a third the arteries, veins and capillaries. The primary cause is often a toxic element, particularly that of syphilis or of alcohol. There is no typical clinical picture of the disease for the reason that the lesions are dependent upon the particular set of vessels involved. Thus the predominant symptoms may be referred to the brain, if the cerebral vessels are involved; gangrene may develop if there is absolute occlusion of an artery in a limb; and as the different cases are brought before you, you will see other phases of the same general condition.

I.—The history of the first patient is as follows: "W. P., aged fifty, family history good; is a hard drinker. He had a chancre followed by a universal eruption twenty-three years ago; took medicine for two months and has never had specific medification since. Ten years ago he had a sluggish ulcer over the hip, which persisted for a long time. Five weeks ago (eleven weeks prior to clinic) a small sore began on the posterior surface of the left leg."

On admission to the hospital the patient had a ragged, deep, indurated, indolent ulcer over the calf of the left leg. The leg was thickened and œdematous, not with the œdema of renal disease which is soft and pits easily on pressure, but with a tough, leathery induration and infiltration of the tissues. On the right leg, though there is no ulcer, you can see a bunch of distended veins which feels like a lot of angle worms under the skin. With the slight obstruction of the return circulation made by rolling up his trousers, the superficial veins are rapidly enlarging. You can readily understand that with veins so lacking in proper tone as these, the constant obstacle to the return of blood occasioned by gravity alone is sufficient to cause a bursting of some branch, a diminished withdrawal of effete products from some area, and, consequently, an ulcer which does not tend to heal spontaneously and which may resist all our efforts to effect a cure.

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There is no condition which will offer so great an opportunity for the establishment of a reputation, as some phase of angio-sclerosis that is amenable to treatment. One may be able to heal an ulcer that has persisted for years; and, as you will see in some of the cases to be brought before you, it is possible to bring a man from an apparently dying condition to one of comfort and relative health. At the same time it is rarely possible to effect a radical cure, and many cases of chronic ulcer will prove obstinate.

This patient was put upon his back, with the leg elevated so that gravity would assist the return circulation so far as possible. An elastic bandage was put around the leg to cause the resorption of the old exudate, and a very simple ointment was applied to the ulcer. I was rather interested to determine whether there was anything of a syphilitic nature about the sore itself, as there undoubtedly was about the underlying condition of vascular degeneration. With this question in view, I suspended the potassium iodid that he had taken only for a day or two, so that there should be no indirect help in the healing of the ulcer. He was given nutritious diet and an occasional dose of Carlsbad salt to aid in the elimination of resorbed products. The improvement is evident to all who can compare his present condition with that of the time of admission to the hospital.

The underlying cause of his arterial and venous changes must be looked after. Alcohol must be interdicted, the occupation should be such as will not keep the patient upon his feet too much of the day, and especially not unless he can walk about, for standing still is worse than walking, since muscular contraction and relaxation aid in the onward flow of blood through the veins. It would also be well for the man to wear constantly on both legs elastic stockings. These should come up above the knees, for I find that the popliteal veins are very noticeably involved in the dilatation. Potassium iodid would be indicated for the purpose of opposing the tendency toward deposition of occluding connective tissue in the intima of the vessels.

II.—The second patient entered the hospital three weeks ago, and I am sure I do not overrate his condition when I say that he was not expected to live twenty-four hours. He was cyanotic, even his nails were blue; his eyes started from their sockets; he was gasping for breath, and unable to gain the necessary amount of oxygen though his respirations were thirty or more to the minute. His temperature was 100° F., soon dropping to 97°; the pulse was 125 and extremely weak. There was an almost uniform edema of both lungs, and, on account of this condition, the liver was pressed downward about two inches. There was nothing in the family nor previous personal history of the patient to explain his condition. A year ago he had a somewhat similar attack, during which swelling of the feet and shortness of breath were noticed. His present trouble began three weeks ago in the same way, and the shortness of breath is directly accounted for by the edema of the lungs, while the edema, both of the lungs and of the extremities, is to be referred to the circulatory disturbance. To-day, the patient walks into the clinic and says that he feels as well as usual. Yet, while you might not at first sight recognize him as a sick man, you should be able to diagnose his fundamental condition even in the present state.

Arterial sclerosis is a degenerative disease primarily, but the degeneration is followed by an inflammation, and the two processes thenceforth go on hand in hand. A marked thickening of the internal coat of the arteries is caused, producing more or less obstruction. Then there comes a breaking down of the newly formed tissue, with points of necrosis and, later, the deposition of calcareous matter in these points of necrosis, so that the wall of the artery becomes rigid, irregular and as hard, almost, as pipe-stem. Save for the irregularities, the comparison to a pipe-stem in this case would be a good one. Very similar changes may occur in the veins, and I shall never forget a case that was sent to the hospital two years ago by Dr. Benedict. The patient was an old woman whose veins were so calcified that, by rapping on them with a pencil, I could elicit a sound loud enough to be heard all over the room.

According as the change occurs in arteries, veins, capillaries, or heart, one or several combined, and as different parts of the body are involved, various symptoms are produced. Thus, the varicose ulcer

and the stroke of apoplexy are due to the same underlying cause—the latter representing the cerebral type; while we may also recognize cardio-vascular sclerosis, a renal type, and a combination of the latter two in the so-called arterio-capillary fibrosis.

Angio-sclerosis is usually a manifestation of age and yet of age which cannot be measured by years. Some people bring about these changes in their arteries from abuse or overuse, and there is not the least doubt but that some are older at twenty-nine then are others at sixty. The duration of the youthful state of the arteries depends largely on heredity, upon the amount of elasticity of the vessels, upon the longevity of the family. The poisons of infectious diseases are a curative factor, and among the very worst and youngest cases are those dependent on syphilis. Syphilis may produce absolute obliteration of arteries and, thus, gangrene.

You will notice that this man has a very tortuous temporal artery. On attempting to feel the pulse in the left wrist, I come upon what feels like a lymph-node. In the right wrist, the artery makes a backward turn, and as I run my finger along it, it has the rough feeling of the trachea of a bird. Such an artery is often likened to a string of beads. I can feel the artery three inches above the wrist, where it never should be felt, though we may in a lean person feel the beat of the pulse as far as that. There is a difference between feeling an artery and feeling the pulsation of blood through it.

The examination of the heart should verify the diagnosis by an increase in the aortic sound, indicating a resistance to the outward passage of blood from the arteries. The heart-sounds, now, are not abnormal, but when he entered the hospital the first sound was scarcely appreciable, the rhythm of the beat was lost, the action of the heart was reduplicated, intermittent and irregular. There were no murmurs, but there was an exaggerated second sound both over the aortic valves and over the pulmonary artery, since the edema of the lungs as well as of other parts interfered with the onward rush of arterial blood. I believe that the patient has still a congested liver. The upper border is at the fourth rib, where the nipple is located, but the lower margin is an inch below the costal arch.

What was done to relieve the patient? His arterial tension was diminished by doses of glonoin, measured not by the amount but by the effect. Some patients will take only $\frac{1}{100}$ grain, two or three times a day; others will require $\frac{1}{50}$ every hour, and if $\frac{1}{50}$ will not accomplish the desired result, give $\frac{1}{25}$. The very tolerance shows that there is great need of the drug. There was also promptly given a saturated solution of salts with the object of depleting the portal system which, at that time, was overloaded with blood and was giving rise to hepatic congestion. I believe that the general edema of the lower extremities was due in great measure to the portal obstruction and not to the condition of the general circulation. The patient was kept on his back to lessen the work of the heart, and, in spite of the need of depressing blood tension, there was also an indication for stimulating the heart, which was done by the administration of small doses of digitalis. Once the patient was cupped, but I will say that this procedure probably did not relieve him. When you apply cups, you bring about a local congestion and edema, and this is useful in withdrawing blood from an inflammatory process. It is said that you can make an actual imprint upon the pleura, so that there is a possible contra-indication to the use of cups in pleurisy. The way to help along a laboring heart, is not to draw blood into any part of the venous circulation which is already overloaded with blood, but to hurry the blood onward. Thus, cardiac stimulants, vaso-dilators and hydrogogue cathartics are indicated. Under this treatment the heart regained its regularity and the patient feels quite well.

The only sample of urine of which a quantitative examination was made, amounted to 400 c.c. for the 24 hours; was red, acid; of a specific gravity of 1035; contained 12 grams of urea, a small amount of albumin, but no sugar. The microscopical examination was negative. Albumin was found in two of three samples examined.

In almost all these cases there are, sooner or later, renal changes. When the circulation is of such a character renal complication is inevitable if the disease lasts long enough. The degeneration progresses gradually from the other vessels to those of kidney, so that, finally, a

granular kidney results. When there is marked involvement of the kidneys and the urine is scanty, the steam-bath becomes a very useful addition to the treatment, as it calls the skin to our aid in eliminating the waste products which the kidneys can not dispose of.

The question is asked whether bleeding would be indicated to relieve arterial tension. Personally, I do not indulge much in bleeding, though it is undoubtedly an excellent procedure in certain cases. In cases such as this, it would be useful to let off blood in the far or venous side of the circulation, and yet we must consider that the patient is not in a condition to actually lose blood. Though he has too much in his veins, he has not too much, and perhaps not enough, in his whole circulation. Particularly when the pulse is hard and bounding, I have resorted to a substitute for bleeding-profuse purgation. Such a course is indicated when an apoplexy is threatening. You will come upon cases in which one stroke of apoplexy has occurred and the patient has a hard, bounding pulse and sensations of vertigo, and in these circumstances, prompt blood letting is undoubtedly of benefit; yet you can not prove that you have averted a stroke of apoplexy. If there is already a cerebral hemorrhage going on, it may be imperative to diminish blood pressure at once by venesection, but under ordinary circumstances the few hours' delay in bringing about the same end by purgation will be immaterial.

III.—The history of this patient is as follows: "Aged fifty-four, Irish, laborer, single, family history good, moderate drinker up to six years ago, has had gonorrhœa and syphilis; syphilitic eruption in 1864 removed by treatment, recurred a year later and lasted four months, after another course of treatment the eruption disappeared finally. Four months ago had retention of urine, being able to pass only the overflow. Two weeks ago, took cold and suffered with pains in bones and some fever. Appetite poor, bowels constipated, great thirst most of the time."

This patient has not come in here with any active disease; he expresses himself as feeling "mean." He has no real pain but a general soreness, and though he can walk, he becomes easily fatigued. He has some headache, for the most part frontal.

He is rather a robust man, his skin is aged not more than 54, but his arteries are at least 90. They have nearly run their course. His pulse is slow, but the heart itself is not particularly involved; certainly not in the sense that there is a well marked valvular disease or alteration in size. Sooner or later, however, the heart, acting against unyielding pipe-stem arteries, will dilate. The arterial changes are most marked around the coronary arteries in many cases, and these vessels may become partially obliterated. In that case, the heart will receive a diminished blood supply, a fibrosis and fatty degeneration will occur, and a cardiac dilatation with all its symptoms is inevitably added to the type of arterial sclerosis. Usually, such dilatation causes a disproportion between the valves and their openings, so that regurgitation results. Sometimes the coronary arteries become plugged and death follows immediately. This man's aorta would undoubtedly present an ulcerated surface with thick calcareous scales. These may become detached and form emboli wherever they happen to lodge.

The question is asked whether such a patient, with a good heart and degenerated arteries, is not especially predisposed to aneurysm. The point is very well taken, and yet a tabulated list of these cases will show that aneurysm comes much earlier in the course of the disease, usually being developed by the fortieth year. It may be that although the circulatory organs predispose to the occurrence of some lesion, the brittleness of the arterial coats prevents the gradual yielding that is necessary to the formation of an aneurysm.

I believe that the arteritis in this case is syphilitic. It can scarcely be ascribed to heredity; his mother lived to the age of 85, and his father was carried off suddenly at 55, by inflammation of the bowels. In a patient who seems to be otherwise well, with arterial sclerosis so well advanced and without a marked family tendency, the probability is that the lesion is syphilitic.

Alcohol should be avoided. Antisyphilitic treatment should be continued vigorously and for some time. Potassium iodid seems most suited to this stage of the disease, but even here small doses of mercurous iodid may be added with advantage. I would give a very liberal allowance of liquids. Milk is easily digested

and, at the same time, it will aid elimination and will be unirritating to the kidneys. Derivatives are not indicated as a routine, but the tongue is coated and, more on account of the condition of the stomach than for the sake of causing elimination through the bowels, I would recommend the administration of Carlsbad salt. At times, I would stop the mercury and replace it with iron. The amount of change that these arteries have already undergone will not be materially modified. It is as much of a permanent change as would be a scar on the surface of the body.

IV.—The most marked case of angiosclerosis that we have in the hospital at present, is that of a man who was brought here with the expectation that he would die in the ambulance. He illustrates rather the cerebral type of the disease. He is a little rebellious; somewhat inclined to be talkative, though, at other times he is dull; his memory has failed markedly, and he presents various other signs of mental alienation. There is considerable albuminuria, and this morning he does not seem to have clear vision, since he says that he can see only a few persons present, and has to turn his head little by little to take in a view of the clinic room. He explains that he has not cleaned his eyes this morning, but there is no gumming of the lids. You will notice the peculiar pallor of the hands and extremities in general, and the puffiness under the eyes. These are at present the only indications of the renal complication of the general condition. When he entered the hospital he had pulmonary edema to such a degree that his respirations were above 30 to the minute for several days, and on one occasion reached a frequency of 48. The line of treatment was exactly the same as for the second patient studied.

This patient will probably recover sufficiently to leave the hospital, but he will not improve to any marked degree. Evidently parts of his brain are insufficiently supplied with blood, and we should rather expect those degenerative changes to occur which have been called softening of the brain—the term is not a good one. Without showing the signs of apoplexy, the case is, nevertheless, one that comes under the category of cerebral angio sclerosis.

BENIGN TUMORS OF THE LARYNX; REPORT OF A CASE.

DUNBAR ROY, A.B., M.D., ATLANTA, GA.*

According to my observation tumors of the larynx, whether benign or malignant, are by no means so common in America as they are in European countries. Whether this be due to external influences, habits of living, or to some racial peculiarity I am unable to say, but these observations of mine are in accord with those other writers upon this subject.

The importance of any disease is never more forcibly impressed upon the public than when it has attacked some potentate or person of eminence; hence it is that since the time when the Emperor of Germany fell victim to the ravages of an endolaryngeal neoplasm, laymen and physicians have viewed with awe and gloomy prognostications the final outcome of any laryngeal growths.

Long before Emanuel Garcia gave to the world the now invaluable laryngoscope, tumors of the larynx were diagnosed by palpation and ausculation. Morel McKenzie tells us that Koderik operated successfully upon a growth through the mouth about the year 1750, it being perhaps the first authentic case on record. From that time on, various uncertain cases were reported, but it was not until 1850 that Ehrman published in Strassburg his celebrated treatise on that subject with a report of thirty-one cases. In 1852, a still further addition to the list was made by Dr. Horace Green, of New York, who reported fifty-two cases, among which two had occurred in his own prac-

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tice. While the report of these cases had all been of interest, they had been found mostly at post-mortem examinations. By the invention of the laryngoscope new impetus was given to the subject and soon the list was augmented by the report of additional cases. In 1866, among the very first, was a monograph by Dr. Elsberg, of Philadelphia, in which he reviewed the subject and reported thirteen cases of his own. Since then, cases have been recorded, especially by Morel McKenzie of London, Stoerk and Schmitzler of Vienna, Oertel of Munich, and, in 1876, Fanvel, of Paris, reported three hundred cases with two hundred and twenty operations. Fanvel was among the first to introduce instruments for the successful removal of these growths through the mouth. An excellent work was published by Dr. Paul Bruns in 1878, on the relative merits of endolaryngeal treatment and throtomy. Since that time so many cases have been reported that, now, they are no longer looked upon as a rarity. One case occurring in my private practice, is of enough interest to allow some practical points to be deduced.

H. M., German, aged twenty-five, baker, presented himself at my office on account of hoarseness which was gradually increasing. The patient is strong, healthy-looking, and gives no external signs of disease. Says that he has always enjoyed good health, the only trouble being with his throat, with which he has suffered for the last two years. He suffers a great deal with colds, at which times his throat-trouble is much more irritating. He has been hoarse now for two years, but beyond that there is no uncomfortable symptom. His breathing is never interfered with.

No trouble was experienced in getting a good laryngoscopic picture. Anteriorly on the free and lower border of the left vocal chord, there could be seen a little polypoid mass about 6 mm. broad. It was not pedunculated, a portion of it protruding above the vocal chords on attempted phonation. With a probe the mass was found to be freely movable, and it bled but slightly from such manipulations. A diagnosis of papilloma was made clinically, which was afterwards confirmed by the microscope. The vocal bands and sides of the ventricles were partly covered with a thick, dirty secretion. The mucous membrane appeared atrophic, and this condition extended up the pharyngeal wall into the nasal cavity, On examining the nose a marked case of atrophic rhinitis was seen, with large flakes of dirty yellowish secretion clinging to its walls. It was very evident that this secretion was exaggerating the condition which already existed in the larynx.

As a laryngeal image could be perfectly obtained, there was no necessity for training the parts in order to carry out the instrumental manipulations which were to follow. The tumor was removed without much difficulty with a pair of laryngeal cutting forceps. At the point of removal the chord was very much thickened and parts of the basal attachment of the tumor remained. These latter I removed with astringent applications of chloride of zinc and the electro-cautery. From this time the voice was much louder and clearer, the only trouble being a slight degree of hoarseness in the morning, due to the clogging up of the larynx during the night with the sticky atrophic secretion.

Tumors of the larynx are divided, like tumors in other portions of the human economy, into (1) benign; (2) malignant. Fortunately for the human race the latter class is very rare, and since the case reported comes under the head of benign, my few remarks will be confined to that class.

As to the cause of these benign growths many writers differ. Sir Morel McKenzie holds that chronic congestion of the laryngeal mucous membrane is the most prolific cause of these growths, and, since a catarrhal condition of the nose and throat is a leading factor in this chronic congestion, it must be looked upon as a most decided predisposing cause. In like manner many writers hold that a chronic catarrh of the nasal mucous membrane is the main causal factor in producing the different growths in that locality—polypi, fibrous excrescences, exostoses, etc., and some of them go so far as to say that it is the only cause. Lennox Browne is another writer who believes in local irritation as the exciting cause. He quotes McKenzie as saying "that diathetic conditions, as syphilis, tubercle, etc., exercise a decidedly antagonistic influence to the development of new formation," which Browne strenuously denies and cites several cases as sustaining him in these views. Cohen

believes that the exanthemata, variola, scarlatina, etc., through the catarrhal condition which they occasion upon the respiratory mucous membrane, are frequently exciting causes. McKenzie says that the professional use of the voice is one of the circumstances favorable to the development of these growths, and declares that 21 per cent. of his patients old enough to have such an occupation, were subject to this influence. Strange to say, in this statement there is unanimity between him and Lennox Browne, and both of them have had large opportunities for examining the throats of professional vocalists.

As to the age in which these growths most frequently occur, there appears, as usual, a diversity of opinion. Dr. Tabold in his article "Die Chronischen Kehlkopfskrankheiten," says that the affection is most common in middle life, from the thirtieth to the sixtieth year; that laryngeal polypi are least frequently seen in childhood. Dr. Causit, on the other hand, believes that they most frequently occur in early infancy, and goes so far as to say that the disease is very often congental. Dr. Arthur Edis has reported (*Transactions of the Obstetrical Society of the United Kingdom*), the case of a child who died from suffocation thirty seven hours after birth, and a cyst about the size of a hazel nut was found in the larynx. Dr. McKenzie, from the statistics of cases treated by himself, concludes that the most favorable time of life is between the ages of twenty-five and fifty. Doctor Burns has reported a case of tumor in a patient seventy-four years of age, while Rosenbach has reported 86 operations for laryngeal polypi, the youngest being four and a half years old, the oldest between sixty and seventy.

Benign tumors of the larynx are divided by most writers into the following classification:

1. Papillomata.
2. Fibromata.
3. Myxomata.
4. Cystic tumors.
5. Angiomata.
6. Lipomata.

Of these the papillomata are by far the most common, and such was the character of the neoplasm reported by me. McKenzie says, "In my one hundred tabulated cases, sixty-seven were judged to be of this character." It would be impossible for me in this short article to go into the clinical characteristics of all the benign neoplasms, and since the case reported above concerned only a papilloma, my remarks will be confined in the main to this class, both in regard to symptoms and treatment.

Papillomata of the larynx may be either sessile or pedunculated, and while they usually occur singly, they may be multiple in their growth. They are usually small and are by no means limited to one special position, although Lennox Browne says that they occur most frequently in the anterior portion of the vocal chords, and on the right more frequently than on the left. They are usually of a pinkish color and, according to Browne, they do not bleed easily when touched with a probe, which is one of their diagnostic points.

The symptoms to which they give rise depend largely upon their size and position in the larynx. For instance, growths upon the epiglottis will occasion some discomfort upon deglutition, while those upon vocal chords will have aphonia as their most prominent symptom. Aphonia is, perhaps, the most prominent symptom, since the vocal bands are more often the seat of origin for these growths than any other point in the larynx, Another noticeable fact, which has been mentioned by various writers, is that a small growth is more apt to produce aphonia than is a large one, since the latter sometimes takes the place of a true vocal cord in the patient's effort to articulate. In the patient referred to, hoarseness was one of the prominent symptoms, and in fact the only one. He had been treated with all the remedies known to materia medica, both by internal administrations and by inhalations, with, of course, no beneficial results. And right here I should like to call attention to the fact that general practitioners are not as familiar with the use of the laryngoscope as they should be —knowledge which requires but a small outlay for the necessary instruments and but very little practice for the proper manipulation of the same. Cases other than mine, are frequently reported, where hoarseness and the other symptoms of chronic laryngitis have been treated for years with the ordinary remedies, to be relieved finally only by the removal of a laryngeal growth which was found to exist.

The treatment of papillomata is their removal as thoroughly as possible. I say

possible, meaning of course their removal through the mouth, for whenever they are so large as to render it impossible to remove them in this manner, their size will very probably soon demand a laryngotomy. These neoplasms not being primarily malignant, are injurious mainly in their interference with phonation and the chances of their becoming so large as to interfere with respiration. When not excesively large their removal through the mouth is usually not very difficult; yet this operation, like many others, requires considerable dexterity on the part of the operator. Various instruments have been devised for the removal of the growths, in the way of cutting forceps, laryngeal knives, snares, etc., but I have found that the most satisfactory instrument is the Gibb's laryngeal écraseur. I believe with Lennox Browne, that every instrument capable of doing injury to the larynx should be thoroughly guarded. The cold wire snare is the least dangerous to the parts and when rightly manipulated is most satisfactory in its results. Cutting forceps, as a rule remove only a small portion of the growth at a time, and that usually with a good deal of pulling and tearing, and with much discomfort to the patient. Prof. Storck's cutting instruments are of course free from these objectionable features. Dr. McCoy, of Philadelphia, extols the galvano-cautery for the destruction of the growths, but any one who has ever tried to use a cautery point in the larynx knows how apt this organ is to contract at the wrong moment and in this way receive irreparable injury. In the majority of cases, even with the use of cocaine, the patient must be trained for a week or two before he or she will endure instrumental manipulations in the larynx. Some laryngologists use strong chemical caustics to destroy these neoplasms, but such procedures are obsolete, and are entirely too tedious if the tumors are large enough to be grasped by instruments.

The question has often been asked whether these benign growths are not apt to be transformed into those of a malignant type, especially if there is instrumental interference. In answer to this question, I can do no better than recite the ideas of the late Sir Morel McKenzie on the point. He says that beyond the recurrence of the neoplasm at the point of removal, he knows, in his own experience, of no case which has subsequently taken on a malignant type from laryngeal irritation. In the literature upon the subject, he knows of but three authentically reported cases.

To sum up in a few words the main points brought forward on this article:

1. Neoplasms of the larynx are either (*a*) benign, or (*b*) malignant.
2. Of the benign growths, papillomata are by far the most frequent, and, as a rule, occur between the ages of twenty-five and fifty.
3. The main symptoms are (*a*) aphonia, (*b*) dysphagia, (*c*) dyspnœa.
4. The best treatment is their removal whenever possible.
5. The best authorities agree that a transformation into the malignant type from instrumental interference does not occur.

The Chemical Pathology of Uræmia.

In a recent experimental study of uræmia, Hughes and Carter have contributed to the pathology of this important condition (*Amer. Jour. of the Med. Sciences*). They conclude that there is one poison, present alike in uræmic human blood, in dropsical effusions in uræmia, and in dog's blood in experimental uræmia; and that this poison is not one of the ordinarily recognized constituents of the urine, as generally believed, but one whose nature or even existence has not before been recognized. The facts that its action is much lessened after subjection to moderate heat, and that it is not readily dialyzable, seem to indicate that the poison is an albuminous body; while clinical evidence indicates that it is not a constant constituent of the blood, but produces the uræmic condition by accumulation, owing to the inability of the kidneys to excrete it, or more rarely by a sudden and enormous production. The order in which serums stand as to their toxicity, proceeding from the most toxic to the least, is, man's, the dog's, the horse's. This suggests to the writers that the origin of the substance is to be traced to the character of the food, which is more nearly carnivorous with man and the dog and purely herbivorous with the horse, and that its production takes place somewhere in the digestive tract.

COMMUNICATIONS.

STRYCHNIA AS A CURATIVE AGENT IN THE TREATMENT OF ASCITES.*

THOS. J. McKIE, WOODLAWN, S. C.

In our eager and no less industrious search after new and often untried therapeutic agents for the cure of disease, or the relief of human suffering, the older and sometimes more reliable and more useful remedies are in great danger of being overlooked if not entirely discarded from our list of remedial agents.

Having had occasion several years ago to call the attention of the profession to the subject of this paper, I feel that an apology may be due this association for introducing at this time so trite a subject as the treatment of ascites.

Some time ago, while discussing the treatment of abdominal dropsy with a member of this body, he remarked that the treatment was as simple as the cure is easy.

Upon interrogating him as to this all sufficient remedial agent, his reply was mercury, calomel in small and repeated doses. This is truly a simple treatment, though it has not proven to be sufficient, satisfactory or always safe in my hands.

The fact is familiar to all, that dropsy, abdominal or other, has long been regarded as a symptom of disease rather than a disease itself. And, in the language of a most distinguished† writer, it has been affirmed that it would be more philosophical and scientific to treat the original malady upon which the effusion or accumulation depends, to erase dropsy from the list of substantive disease and to place it in the catalogue of mere symptoms.

But this, in my mind, is a very mistaken view of the matter. For, first, it is oftentimes uncertain, while the patient is yet alive, what or where the primary disease may be; and even after death we sometimes can discover no organic change that would satisfactorily account for the effusion. Practically speaking, in such cases the dropsy is the disease, and the sole object of our treatment.

And, secondly, dropsy is in fact to a medical eye in all cases, something more than an effect or symptom of disease. The imprisoned liquid is often a cause of various other symptoms; embarrassing by its pressure, important functions and even extinguishing life. The removal of the dropsy, (although its original cause, of which it was a symptom, may remain behind untouched, to be again productive of effusion under circumstances favorable to its operation) will often restore a person to comparative comfort, or even to what, so far as his sensations and powers and belief are concerned, is to him, for the time, a state of health.

Without essaying any refinement in diagnosis, or attempting to distinguish dropsy as a disease and dropsy as a symptom in the treatment of ascites, it is proposed to speak of it as a disease *per se*, and more particularly of the use of strychnia as a curative agent in that disease. No sound practitioner, however, will close his eyes to any concomitant which may appear, whether it be functional or organic; or fail to supplement any line of treatment with remedies specially adapted to existing conditions whatever may be his faith in that drug or material. Nor would he neglect any febrile movement, where such condition exists any more than he would ignore the existence of an engorged liver, or obstructed portal circulation, or torpid state of bowels, or cardiac or venal derangement. Adjuvants are useful and helpful in all cases.

It is deemed safe and within the limits of conservatism, founded on a somewhat extended experience, to speak of strychnia as a curative agent in the treatment of ascites. While the claim to priority in the use of this agent as above stated is just

*Read by title before the South Carolina State Medical Association, 1894.

†Sir Thomas Watson.

so far as my knowledge goes, it is the result of an accident. Many years ago there came into my hands for treatment a negro woman about forty years of age, and the mother of eight or ten children, who, in the hands of other practitioners in the neighborhood, had gone through the usual course of treatment without avail, and who had already undergone many tappings. In my hands these were continued with considerable regularity at intervals of fourteen, sixteen to twenty days, until paralysis of one side took place. For this strychnia was prescribed, and the trocar or other evacuating instrument was never afterwards neceessary in her case. The dropsy was cured, as was also the paralysis of the leg, though the use of the arm was never fully restored.

Some years after, the case of another woman presented itself. She was a bright mulatto, about thirty-six years of age, the mother of seven children, and had enjoyed good health previous to this attack, which set in with decided inflammatory symptoms rapidly resulting in œdema of the lower extremities soon followed by peritoneal effusion which demanded the use of the trocar.

After a number of tappings the intervals between some of which did not exceed ten days, she began the use of strychnia, and was cured of her dropsy. During the second year afterwards she bore another child, dying five or six years later in the hands of another practitioner, and without any return of her dropsical symptoms.

A still more remarkable case, perhaps, is that of a gentleman forty-eight years of age, who at various times had been in the hands of neighboring practitioners, (as the patient informed me) for treatment of supposed incipient tuberculosis, he having suffered for some time with dyspoena, cough and sanguineous expectoration, followed by wasting, inability to preserve the recumbent posture, œdema of lower extremities, and other evidences of anemia. To be brief, when this patient was first visited, more than a year after the first symptoms presented themselves, he was found laboring under anasarca as well as ascites. There was also distressing dyspnoea inability to rest in the recumbent posture, some cough and tumultuous heart action. In this case the dropsy was evidently symptomatic, and had its origin, no doubt, in valvular insufficiency with blood stasis of the pulmonary tissues resulting in cough with bloody expectoration. Under the use of cardiac sedatives, diuretics and purgatives there was decided amelioration of the more distressing symptoms, but the anasarca, pari pasu with the ascites, advanced until within a few weeks they assumed the most prominent place in the category of symptoms.

With the distressing peritoneal effusion enormously swollen genitals superadded to the general swelling of the body, face and extremities. Soon the cuticle gave way on the lower extremities, discharging each day a considerable quantity of serum.

Under the use of strychnia there was gradual improvement. When last heard from, (three months ago,) this patient was eating and sleeping well, being then about the farm attending to his affairs in comparative comfort, though with some œdema still present in the lower extremities.

A cure was not expected or hoped for in this case, though it seems that impending dissolution has been averted for more than two years under the continued use of strychnia. The use of this was instituted early in this case in connection with remedies previously mentioned, and given in 1-30 gr. doses every eight hours, gradually increasing the dose until the 1-11 gr. was reached, when the muscular pain of the arm became so great as to make it necessary to reduce the dose, or for a time suspend its use entirely. That its physiologic effect shall be experienced seems necessary to its full therapeutic action, and it has been found safe to increase the dose to that extent.

Case 4 was that of a young lady twenty-years of age, who was first seen in April, 1893. She had previously been in charge of another attendant whose service had been, as reported, very irregular, and who had suspected incipient tuberculosis on account of the prominent pectoral symptoms, cough, dyspoena, rather free expectoration, and the known fact that several members of the family had died of that disease.

At this visit, besides great irregularity of pulse beat, there was present dyspoena, slight cough, diastolic heart murmur, œdema of feet and ankles extending nearly to the knees, and ascites so prominent as to offer mechanical obstruction to the respiratory act even in the sitting posture,

recumbency being quite out of the question. This was evidently another case of symptomatic dropsy caused by grave structural lesion of the centre of circulation.

Under the use of diuretics, cardic sedatives, occasional hydragogue cathartics and the constant use of strychnia gradual improvement took place. The patient was so far relieved as to be able to rest in bed, eat well, take out-door exercise, even going so far as horseback riding. At this period treatment was interrupted, and was not renewed, (owing to the absence of the attendant,) until the swelling had again made considerable progress. When treatment was again applied for, and the strychnia given as before, it was without effect, and the patient died eleven months from date of first visit.

This brief and very cursory account of these four cases of ascites in which strychnia was freely used, will, it is hoped, suffice to show the effect, and serve also to bring to the notice of the Association an experience with a remedy, the mention of which, so far as my reading or observation goes, does not appear in our text books, or in current medical literature, as a therapeutic agent in the treatment of ascites.

CASE OF ENDOCARDITIS AND PERICARDITIS WITH EFFUSION—ACCIDENTAL TAPPING OF RIGHT VENTRICLE AFTER APPARENT DEATH—RECOVERY.*

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M. B., aged 19 years, a tall, fairly healthy young lady, was seized on 12th May 1894 by a severe attack of erysipelas, which affected chiefly the left side of the face and head, and although it spread over the forehead and part of the right side of the face, was fortunately arrested, under treatment with ichthyol and lanoline externally and iron internally, on the fifth day, and an apparently rapid recovery was about to ensue. The temperature, which at the commencement varied from 103° to 105°, had become normal, all sign of inflammation had disappeared, and a perfect cure seemed established, when suddenly, without any fresh exposure—the patient never having been allowed out of bed—a very severe attack of rheumatic fever developed.

To this there was a marked family predisposition, her father having suffered from a prolonged attack of acute rheumatism, which left him a martyr for sixteen years to subacute attacks, and completely deformed him; and her only brother having twice had attacks of rheumatic fever, and suffered frequently from rheumatic sore throat. Her mother and two sisters are alive and well; but her father, who at the time of her attack was suffering from tuberculosis of both lungs —the result of influenza—has since died. Her maternal grandfather and grandmother are octogenarians and in good health, but on the paternal side there is a distinct tendency to phthisis.

Her previous illnesses all indicate the same susceptibility to rheumatism. When two months old she suffered from bronchitis, which lasted about a fortnight. At five years of age she had rheumatic fever, and two years afterwards suffered from measles, which was followed by a second slight attack of rheumatic fever. Between the ages of nine and ten she had diphtheria, but for the next eight years enjoyed perfect health. In the beginning of February, 1893 she was attacked with scarlet fever so severely, that from the outset she was put on a water-bed, and in spite of daily 30 gr doses of salol and continued lying between blankets, she was seized with a third sharp attack of rheumatic fever, with accompanying endocarditis. This left a well-marked systolic mitral murmur, which, however, in the course of a few months entirely disappeared, and with the exception of slight œdema of the right foot, she enjoyed robust health till within a few weeks of her

*Read Before the Medical-Chirurgical Society of Edinburg, December 5, 1894.

present attack, when she began to feel her duties as a school teacher rather fatiguing, and doubtless the anxiety regarding her father's health predisposed her to the attack of erysipelas, which was the starting-point of the present, her fourth and most severe attack of rheumatic fever.

Salicylate of soda, in 10 and then in 15-grain doses every three hours, along with aromatic spirits of ammonia, was substituted for the quinine and antipyrin, which had been given along with the iron during the attack of erysipelas, and had been very badly borne. From the 17th to the 22nd fair progress was made, the temperature varying from 99° to 103°, but with a distinct tendency to an evening rise. No great relief, however, was got from the pains, which were general throughout all the joints, and were most severe in the muscles of the calves. An 8-grain Dover powder was given at bedtime with marked benefit, as a few hours' sleep was induced, and the restlessness, which had been characteristic from the first, somewhat allayed. A daily careful examination of the heart revealed nothing till the morning of the 24th, when slight præcordial pain and a feeling of oppression about the chest was complained of, followed in the evening by well-marked friction, the "to-and-fro" murmur being audible over the whole base, but loudest and apparently nearest to the ear over the pulmonary area. The dose of salicylate of soda was increased to 20 grains every four hours, and digitalis added to quieten and strengthen the pulse, which from the beginning of the attack had varied from 100 to 116 per minute, but had been of fair strength, regularity, and volume. Warm poultices and sinapisms were applied locally, with the result that in five days the friction had entirely disappeared, and the patient again seemed in the fair way of recovery. Still the temperature kept irregularly rising and falling in a suspicious manner without sufficient ascertainable cause, and the muscular pains in the limbs became even worse. Salicin alone, and combined with antipyrin, was tried, but ineffectually; and considering the attack to have a possible septic origin, salol in 12-grain doses every four hours was substituted, with a slight resulting decrease in fever, but no diminution in pain. In fact, the only drug administered with certain benefit was the old-fashioned but reliable Dover's powder. During all this time the services of a skilled nurse had been utilized, and every precaution as to diet and the general treatment of a patient suffering from acute rheumatism had been most scrupulously and carefully observed. The urine, tested twice a week, presented no abnormality other than scantiness in amount and excess of urates.

From the 28th of May to the 4th of June the condition of the patient remained much the same, but on the evening of this day there was a return of the friction, and in addition a well-marked systolic mitral murmur was audible. Hourly, almost, a change for the worse progressed, hastened by the thought of parting from a dying father, who was being removed to the country in the vain hope of prolonging his life, and without an interview. Every movement was accompanied by excruciating pain, mostly in the muscles of the lower limbs; nourishment was taken, with difficulty, owing to occasional attacks of sickness; an irritable, hacking cough developed; the pulse became rapid—120 to 140 per minute—feeble, and dicrotic, and the respirations were greatly increased reaching to 30 and 50 per minute. The livid, anxious countenance, the pallor of the lips, the working of the alæ nasi, the dilatation of the veins of the neck and the increased general restlessness, all indicated rapid effusion into the pericardium, which physical examination too truly revealed. The area of cardiac dulness was greatly increased, extending fully half an inch to the right of the sternum, up to the second interspace above, but below and to the left was indistinguishable from a dulness which extended over the whole of the left lung, doubtless due to compression from the bulging pericardium, and probably also to some actual pleuritic effusion, as all breath-sounds were inaudible over the whole of the left base, and up to the middle of the scapula. Friction was still to be heard, but the actual heart sounds were distant, feeble, and obscured.

From the 8th to the 11th matters got worse, the changing color of the face indicating the possibility of a fatal faint at any moment, and an ever-present terror of approaching death adding greatly to the patient's discomfort and pain. By this time all anti-rheumatic remedies had been stopped, and stimulants, in the form

of champagne and brandy, freely given, while a mixture of strophanthus, strychnine, and iron was added with a view to keep up the heart's action. Two blisters were applied over the præcordium, and sinapisms to the bases of the lungs. Curiously, all the time the patient could only lie in an absolutely recumbent position, any attempt to raise her with a view to ease the breathing having quite the opposite effect.

My mind was gradually being made up that tapping the pericardium alone would benefit the patient, so on Tuesday, June 12th, Dr. Bramwell was called in consultation. So grave was the patient's condition during the afternoon that the subject of tapping was not even mentioned between us, and the application of another blister was the only remedy suggested. In addition to all the other symptoms, considerable difficulty in swallowing had arisen, showing further increase in the effusion. The blister was applied a little lower down and more to the left than the previous ones, exactly over the apex-beat, which now corresponded to the left nipple.

On the following morning, June 13th, I set up the aspirator and had it ready exhausted in an adjoining room, though the friends of the patient greatly objected to its being used. The pulse, which had been so rapid, had become alarmingly slow—80 per minute—and the nurse was warned if there was further slowing to send at once for assistance.

During the afternoon the patient was seen by Dr. Calder of Leith—a personal friend—who was then of opinion that, tapping or otherwise, she had only an hour or two to live.

About 8 P. M., on my way to the house, and whilst about four minutes' walk from it, I was met by a young lady, who told me to hurry, as my patient was just dead. I ran as quickly as possible, and found that Dr. James Smith had been summoned, to find her either in a fit or faint. The pulse was uncountable and hardly to be felt, and the livid pallor of the face, profuse, cold perspiration, and changing, startled expression, indicating approaching death. First, 30 minims of ether were injected into the arm, and then a sudden dilatation of the pupils and rapid receding of the pulse warned us of further need of stimulation, and 30 minims were injected into the left breast. I proposed tapping; but as the friends were anxious first to see Dr. Bramwell, Dr. Smith ran to telephone for him. Immediately afterwards the heart and respiration stopped, and in the moment of excitement I jumped up, seized the aspirator, and plunged the needle into the fourth interspace, about half an inch to the left of the sternum and a little below the left nipple. To my astonishment, from 8 to 10 ounces of pure blood flowed rapidly into the bottle of the aspirator and then suddenly stopped, and to my dismay I found I had penetrated a cavity of the heart. As I was slowly withdrawing the canula, regretfully telling the nurse it was all over and to close the patient's eyes, to my surprise the heart made first a feeble, irregular movement, then gave a sudden strenuous jump and, finally, like a pendulum regaining its swing or a runner his stride, it started to beat again in the race for life. In moments of intensity it is difficult to estimate time, but I should say fully half a minute had elapsed between the introduction of the needle and the restarting of the heart-beats. It was an extraordinary sensation to feel the heart beating more and more forcibly against the point of the canula, which was gradually withdrawn so as not to further injure the heart-wall.

I was standing with my thumb on the puncture made by the needle, when Drs. Bramwell and Smith made their appearance. My uppermost feeling at first, was one of regret that I had converted a patient practically dead into one apparently dying, and sincerely did I lament she had not been left to pass away in peace, for a most pitiful scene was now enacted for an hour. Occasionally there was given a heart-rending shriek, quantities of frothy mucus were half-coughed, half-vomited and had to be swept out of the mouth with a towel, the blood went ebbing and flowing from the cheeks, which were first ashy-grey then purplish in hue, the pupils were dilated to their fullest extent, the running, following pulse was quite uncountable and the patient had every appearance of one dying asphyxiated. Another dram of ether was injected, with the result that the patient became maniacal, and Dr. Bramwell's suggestion, first one-sixth and then another one-sixth of a grain of morphia was administered hypodermically to keep her quiet. This had a slightly soothing effect, and Drs. Bramwell and

Smith now left, thinking it quite impossible the patient could live through the night. In another hour, however, her aspect had vastly improved, the lividity of the countenance and pallor of the lips had disappeared, the breathing was easier and the mania was succeeded by the most delightful feeling of intoxication, the patient repeatedly breaking out into ripples of laughter, and saying, "Oh, how nice! What a dear, kind doctor!" "Oh, how funny! Needles and pins, needles and pins running down both legs and arms!" In another half hour she was able to recognize her mother, who had been brought in from the country. The services of two fresh skilled nurses were obtained, and with injunctions that she should be freely stimulated with champagne and brandy, she was left for the night. The blood, which filled one-third of a 30 oz. Winchester jar, had formed a solid clot, and had to be broken up with a stick and dissolved with soda and hot water before the bottle could be cleaned. In it there was no apparent mixture with serum, and clotting had taken place early and was specially firm. The smallest size of the ordinary aspirating needle was used.

During the night the patient was inclined to wander, and the pulse remained very rapid, changeable and irregular, while the respirations varied from 22 to 34 per minute, broken at intervals by a prolonged sigh. Occasionally great anxiety was caused by the deathly pallor of the lips spreading round the angles of the mouth, at which times a little brandy or champagne was administered in teaspoonfuls. In the morning consciousness completely returned, and the patient was able to take half a cup of tea and a biscuit. She had no recollection whatever of the dreadful crisis she had passed through, having been quite unconscious during the operation of tapping; and when puzzled as to the piece of plaster over her left breast, was told it was part of the dressing of her blister, as it was thought wiser to avoid any excitement. The pulse varied from 118 to 122 per minute, and was still very feeble and irregular, with a long pause at every fourth beat. The most absolute rest was enjoined; liquid nourishment was given in small quantities frequently, and stimulant only in drachm doses, and with caution, in fear of over-exciting the already too tremulous heart's action. In the afternoon the temperature rose to 101°-4, but this was accounted for by the exhaustion and the general feeling of soreness, due to continued lying in the same position. As there was still a tendency to mental excitement and no further sleep had been obtained, at 12.30 A. M., 15 grs. of bromide of potassium were given, after which she slept till 2 A. M. At 4.30 there was great restlessness, and other 15 grs. were given, with the result that repeated short sleeps were obtained between the times of administration of nourishment. Two days after the operation the temperature fell suddenly to normal, and the pulse from 104 to 40, which occasioned great anxiety; and this happened from time to time, till the pericardial effusion cleared away about eight days afterwards, while the slightest movement on the part of the patient caused immediate paling of the lips and face.

It is needless for me to detail the daily progress of the case, which was hourly observed and noted by the two nurses to whose superb after-attention the patient owes her life. It will suffice for me to point out that after the fifth day there was no rise in the temperature above 99° until July 2d, and it was due to slight gastric disturbance, the consequence of overfeeding; that the pulse first became regular, then gradually slower, till on the 22d of June it reached the normal rate of 76, and the respirations, which had varied from 22 to 30, correspondingly declined to 18 per minute. During the first twenty-four hours no urine was passed, and for seven days after only 12 to 14 ounces daily, thick with urates; but the patient continued at times to perspire so freely that her flannel gowns had to be changed frequently. The first urine passed contained no sugar nor albumen, but was greatly discolored owing to the previous free administration of salol. Solid food in the form of white fish was first given six days after the tapping, and the cardiac tonic of arsenic, strophanthus, strychnine and iron resumed. Fruit in the form of bananas and oranges was allowed, and strong soups flavored with vegetable juices given with a view to combating the profound anæmia which had ensued. Stimulants were only given when specially called for, and the bowels relieved by glycerine enemata. The only

complaint the patient had was about the soreness of her bones, owing to her great emaciation; but an attempt to put her on a water-bed caused such alarming faintness it had to be abandoned.

It is the most extraordinary fact that here was a case of rheumatic fever, apparently of septic origin; which no therapeutic agent with the exception of the opiate, had done anything to alleviate, which almost nightly for three weeks had produced a temperature of 104°; and which, with its complications of endocarditis and pericarditis, had nearly caused the death of the patient, suddenly and finally arrested by the heroic process of drawing off ten ounces of blood direct from the heart. At no time afterwards did the patient suffer from the very slightest rheumatic pain, whilst previously she was practically never free from such night nor day.

For the first five days physical observation could only consist of stethoscopic examination over the heart; but till Tuesday, the 20th June, the heart sounds were represented by irregular, muffled thumps, and were quite indistinguishable in any area. On that day they could be faintly heard and localized—the first sound feeble in the aortic, tricuspid, and pulmonary areas, the second relatively much accentuated; while in the mitral area, and especially over the left nipple, a soft blowing systolic murmur was distinctly audible, with a less certain pre-systolic. Daily the sounds became clearer, and when the patient became stronger, percussion revealed the gradual disappearance of the pericardial effusion, which was further hastened by the daily external application of iodine. A fortnight elapsed before the lungs could be satisfactorily examined, but at the left base there was still extensive dullness and absence of breath-sounds. Rubbing with turpentine, iodine and blister were successful in removing this, and in three weeks, except for great debility, the patient was physically perfectly well, the systolic mitral murmur being the only persistent indication of what she had passed through.

Dr. Bramwell, who daily had looked for some announcement of the patient's death, kindly revisited her on Friday, the 23d, nine days after the tapping and found the young lady whom he had left *in extremis*, apparently without the faintest hope of recovery, enjoying, through the kindness of a too indulgent nurse, a plate of strawberries and cream. In a month the patient was allowed up on a couch, and in another week to make personal efforts which had previously been forbidden; and it was the utmost gratification to me that within seven weeks from the time of cardiac aspiration she was able to be driven seven miles into the country to visit her father, the shock of whose death a day or two afterwards she stood remarkably well. A week after this she was sent to the country and since then has enjoyed perfect health.

December 5th, 1894.—The patient continues in excellent health; she has had no return of the rheumatism, and the cardiac murmur has entirely disappeared.

Sheridan's Wit.

Richard Brinsley Sheridan was never at a loss to exhibit his wit. Once while visiting, feeling rather weary and wishing to rest, he was asked by a fellow-guest whom he did not admire if he did not wish to accompany her for a walk.

Glancing out of the window, Sheridan replied: "It is very cloudy. We shall be caught in the rain."

The other waited awhile. Shortly the sun came through the clouds. "Shall we go now?" she asked. "It has cleared up."

"Why, yes; so I see," said Sheridan. "It has cleared up enough for one, but not enough for two. You go,—*Harper's Young People.*

A Treatment for Acne of the Face.

In an abstract from the *Bulletin General de Therapeutique* which appears in *Lyon Medical*, the writer gives the following formula which, he says, has often been employed at Saint Louis with success: Fresh lard, 750 grains; sublimed sulphur, 105 grains; beta-naphthol and styrax ointment, each, 30 grains. Applications of this mixture should be made with strong friction every night for a week, then interrupted for six days when they may be repeated if necessary, although it is often useless to do so. If there is an appearance of small acute clusters, which generally show themselves toward the second day, the acne is ordinarily cured or very much ameliorated at the end of a week.

TRANSLATIONS.

THE CONGENITAL AND HEREDI TARY ORIGIN OF CANCER.

Critzman (*Le Bul. Méd.* November 7, 1894) declares cancer to be a tumor developed at the expense of a preëxisting epithelium of which the histologic varieties engender tumoral varieties. The fundamental element of cancer is the epithelial cellule, and the malignity alone does not suffice to characterize this neoplasm. There may be eliminated, therefore, from the class of cancerous productions every neoplasm the primordial constituent element of which is drawn from the mesoderm (tumors of the connective tissue group.) Thus simplified, cancer still presents a certain complexity from the point of view of the causes invoked to explain its appearance and its evolution.

Why does cancer develop? What is its nature? Why does it generalize itself? The answers to these different questions are not wanting. The ancients, struck by the coincidence of cancer and the great emotions, chagrin especially, have attributed to the latter the responsibility of the neoplasmic production, and, in modern times, the death of Napoleon succumbing after terrible grief to a cancer of the stomach is an impressive example. This must, however, be only an occassional cause. The infectious nature of cancer, its generalization, its inoculability have induced many savants to search in parasitic life the clue to cancerous productions. The germ has not as yet, however, been discovered. The cancerous graft has been clearly placed in evidence by Virchow. The epithelial cellule characteristic of cancer is equally its cause; effecting its division other than in sound tissue the cancerous cellule is a teratologic epithelial cellule, the proliferation of which will give birth to a monstrous epithelial tissue able to engraft itself by apposition and by generalization. Invading the lymphatic ganglions the cancerous cellule multiplies, and also gives rise to cancerous metastases which are in structure always identical to the tumor to which they owe their existence.

What is the origin of this epithelial cellule of which the development, always tardy, gives origin to cancer?

Cohnheim attributes to tumors in general a congenital origin. For teratomata, and especially dermoid cysts, this hypothesis has received its demonstration; for other tumors, and cancer in particular, the cause is explained most simply in the following manner: At an initial stage of the embryonic development there is produced in one of the portions of the fetal economy, more cells than are necessary for the construction of the part in question. These cells heap up in excess to a given moment, able to develop with all of the intensity of their embryonal nature under the influence of a banal cause which manifests itself, whatever may be its nature and its form, as a circulatory phenomenon—a hyperemia or an anemia. The experiments of Leopold seem to give reason of this conception. Fragments of fetal tissue taken during its intra-uterine life and introduced into the organism of a similar adult animal, continue not only to live but multiply in a manner truly surprising.

The congenital nature of cancer explains sufficiently the heredity of this tumor. Statistics of great value bear very conclusively upon this point. Cancerous patients are able to transmit by heredity cancer to their child. Butlin, who has attempted to construct the family history of cancer of the heart, has concluded that heredity is encountered in the proportion of 1 to 3.

*Translated for THE MEDICAL AND SURGICAL REPORTER by W. A. N. Dorland, M.D.

A New Treatment of Whooping-cough.

Lyon Médical publishes an abstract of an article from the *Médecine Moderne* in which M. de Chateaubourg describes a new treatment of whooping-cough, which consists in injecting, subcutaneously, two cubic centimetres and a half of a ten-per-cent. solution of guaiacol and eucalyptol in sterilized oil. After the third injection the fits of coughing diminish noticeably, the appetite returns, and, as the vomiting rapidly ceases and the general conditions begins to feel the good effects of the treatment, the whooping-cough disappears at the same time. The author reported five cases.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

CHLORATE OF POTASH AS A TOOTH POWDER.

Dr. Unna (*Deutsche Medizinal-Zeitung*, No. 103, 1894) recommends powdered chlorate of potash as the best tooth powder as well as for general disinfection of the mouth. The moist brush is dipped into the powder and as much used as it will take up. The profusely secreted mucus and saliva form a paste with which the teeth are easily cleaned; this is followed by a thorough rinsing of the mouth to remove the drug. The use of this tooth powder is followed for a long time, by a very clean and somewhat salty taste in the mouth, for it cleanses by producing a flow of the natural buccal secretions and its action is not confined to the mouth alone, but to the tonsils and fauces and to any portion of mucous membrane with which it may come into contact. He knows no better remedy which will remove fetidity of the breath, due to putrifaction of food and the secretions of the mouth. He has seen a great number of cases where patients have consulted physicians on account of a bad breath which led them to suspect either a disease of the nose, throat or lungs and which promptly disappeared after use of this simple measure. In cases of fissures or ulcerations in the mouth where the clear drug would cause a great deal of pain he employs a paste containing a smaller percentage and made after the following formula:

Calcium carbonate	āā
Rhizoma iridis	
Soap	
Glycerine	

Equal parts of this base and the chlorate are mixed; it is best dispensed in collapsible tubes. He knows of no better remedy for daily use, nor in the cleansing of the mouth and teeth in all infectious diseases and especially in stomatitis of mercurial origin.

RAPID STERILIZATION OF WATER.

Dr. Grimbert (*Apotheker-Zeitung*, No. 46, 1894) says that one may rapidly sterilize water and at the same time retain its gases and salts by placing it in a thick glass bottle with a patent closing apparatus such as a beer or soda-water bottle and then placing it into a water-bath and keeping it there for one-half hour, at a temperature of 100° C. Water thus sterilized remains clear, of an agreeable taste and retains its salts in solution.

SILK SUTURE SILK IN ANTISEPTIC SOLUTIONS.

Dr. Van Ketel (*Pharmaceutische Zeitung*, No. 68, 1894) has attempted to discover why the solutions of the bichloride in which suture silk is kept in so liable to develop flakes due to various microörganisms. He has found, from experiment, that the silk extracts the antiseptic from the solution; even in the course of twenty-four hours it will withdraw the bichloride from a ½ per cent. solution so that algæ will grow luxuriantly in it. He thinks it probable that the albuminoids and similar substances in the silk enter into combinations with the sublimate. Therefore, he would recommend keeping the silk in absolute alcohol and only placing it into a ½ per cent. sublimate or a 1 per cent. sodium chloride solution immediately before using.

ERUPTION FROM SALICYLATE OF SODA.

Dr. Raff (*Muenchener Medicinische Wochenschrift*, No. 26, 1894), recently observed after administration of twelve grams (℥iij), of the salicylate of soda to a woman of sixty years for an attack of rheumatism, the following condition, which set in after the first teaspoonful: face pale and swollen, great weakness and confined to her bed; both knee-joints greatly swollen and painful. The face presented reddish spots and vesicles behind the ears and the lips were covered with bloody crusts. The hands, arms and nates were covered with a pemphigoid eruption of vesicles and bleeding and oozing patches. Treatment consisted of application of borated vaseline and later, a continuous bath during the day. On the fourteenth day of the disease as a right sided pleuritis had developed and the articular affection remained unchanged the remedy was given again, in a dose of

* In charge of the translator, F. H. Pritchard, M.D.

one gram; in an hour and a half the patient had a chill and the next day a diffuse scarlet redness was seen to cover the whole body. The whole skin appeared, in toto, swollen, while the temperature was elevated. The following morning it had entirely disappeared. Eruptions have frequently been observed after salicylic acid either as erythema, urticaria, vesicular dermatitis, purpura or gangrene. Dr. E. Beier, of Berne, Switzerland (Archiv F. *Dermatologie und Syphilis* Bd. XXVIII, Hft. I) recently observed a similar case where after six grams (ʒjss) of the salicylate of soda an erythematous and pemphigoid eruption of the whole body appeared and, though the remedy was immediately discontinued it persisted and exacerbated after repeating the remedy, but with continued administration, decreased in severity. The local application either in plaster or solution also gave rise to local eruptions of vesicles. The case is of interest on account of the persistence of the symptoms long after discontinuing the drug.

BRANDY SUBCUTANEOUSLY IN CHLOROFORM ANESTHESIA.

Dr. Poucel (*Gazette des Hôpitaux,* No. 99, 1894) for the past four years has employed hypodermics of brandy in chloroform anesthesia and in five hundred cases has always avoided disagreeable complications. He follows, in administering the anesthetic, the drop-by-drop method and when the patient's face becomes pale and the pulse also becomes small and weaker, he injects brandy. The stimulant is diluted with two parts of water and kept ready in a hot water bath at about the body temperature. The outer side of the thigh is usually chosen as the point of injection and about a syringeful introduced into the circulation. The injection may be repeated if the condition of the heart requires it. In a laparatomy, on an average, ten syringefuls were used though as high as a hundred have been given. In cachectic subjects they are made before, during and after the operation. The results were most striking in those with heart diseases, alcoholists, consumptives, little children and old persons.

COCAINE IN DRAWING TEETH.

Dr. W. Lepkowski (*Central Blatt Fuer Chirurgie,* No. 51, 1894) uses cocaine very extensively in dental work and is well satisfied with the results. A three per cent. watery solution is injected around the tooth, into the gum, until it turns entirely white, when further injection is quite painless. One should begin on the lingual side and as a rule, 0.007–0.015 will suffice for complete anesthesia. In extracting the last upper molar he warns against injecting into the fold of mucous membrane back of it as it is quite prone to be followed by symptoms of poisoning. As the first injection is a painful one he also applies to the gum a 10 per cent. solution and injects a 1 per cent. solution around the tooth. Injections into abscesses produce violent pain though one may safely inject into inflamed and infiltrated gums. He does not wait a few minutes after injecting but extracts at once. He has found by experiment that 1 per cent. and 3 per cent. solutions of cocaine arrest the development of cultures of pyogenic microörganisms.

IPECAC NOT AN OXYTOCIC.

Dr. A. Keilmann (*Petersburger Medicinische Wochenschrift,* No. 24, 1894) has tried the tincture of ipecac as an oxytocic in weak uterine contractions as recently recommended by Drapes and Utt of St. Petersburgh and denies that it has any such powers. He would rather advise pushing the head from above down into the pelvis, but under anesthesia.

PETROLEUM IN PULMONARY TUBERCULOSIS.

Dr. Pellisier (*Bulletin Général de Therapeutique,* Tome CXXVI, p. 416) observing that workmen about oil wells are rarely affected with consumption, tried the filtrated crude oil, in treating this disease. It was given in capsules and inhalations of its vapor used at the same time. The results, he claims, were astonishing; the cough and sweats disappeared, the appetite and sleep became normal and the affected portions of the lung healed. Attempts to give it in clysters failed from its slight absorption.

SULPHUR IN DIPHTHERIA.

Dr. C. G. H. Baemuler (*Centralblatt Fuer Die Medicinischen Wissenschaften,* No. 47, 1894) speaks well of the local ap-

plication of sulphur in diphtheria. It is insufflated three to four times a day, in a goodly quantity, upon the affected mucous membrane. If the disease extend deep down into the trachea it is, of course, inapplicable. Its action seems to be purely local and therefore is only indicated in the early stages of the disease before general symptoms have set in.

THUJA OCCIDENTALS AS AN ABORTIFACIENT.

Dr. Kalt (*Schweizer Correspondez-Blatt*, No. 8, 1894) reports the case of an unmarried girl of eighteen years, who seven months pregnant, drank a decoction of thuja occidentalis (arbor vitæ or tree of life). This was followed by a violent nephritis, cystitis, eclampsia and bronchial catarrh. Fourteen days after an abortion followed, the child living twenty-six hours. The placenta showed several infarcts. Eleven days after her labor thrombosis in both saphenous veins was noticed. She recovered only very slowly.

LEUCOPLASIA BUCCALIS AND EPITHELIOMA

Dr. Le Dentu (*Journal des Mâladies Cutanees et Syphilitiques*, No. 11, 1894) states that leucoplasic patches in the mouth very frequently degenerate into epitheliomata. Without being a preceding stage of this form of cancer, yet there is a decided disposition to it on account of their predisposition to degenerate. Therefore as soon as one observes a leucoplasic patch to undergo papillomatous transformation or to present a fissure or ulceration, one should treat it surgically.

Dr. Rosenberg (*Ibidem*) speaks very highly of the iodide of potash in the treatment of leucoplasia buccalis. He advises a concentrated solution as follows:

Distilled water.....	100	o	℥ iij, ℥ j
Iodide potash	10	o	℥ ijss

Apply locally by means of a camel's hair brush.

Treated thus he has seen a leucoplasia disappear which had lasted for seven years, and which had resisted the most varied treatment.

Dr. Leistikow (*Ibidem*) advises the following paste in the same disease:

Finely powdered silex.....	3	o	grs. xlv
Resorcine	6	o	℥ jss
Lard.....	1	o	grs. xv

Apply this paste to the patches between meals and on going to bed upon small tampons, fixed in the mouth and rub the patches also with it well. At the end of eight to fourteen days they will shrivel up, fall off and leave a red and congested mucous membrane. This is then treated with the balsam of Peru. Healing will take place little by little. The silex renders the penetration of the resorcine easier and acts as a mechanical adjuvant.

HYPODERMIC INJECTION OF SALT WATER IN PERNICIOUS ANEMIA.

Dr. K. E. Lindén (*Finska Laekaresaellskapets Handlingar*, bd. 36, s 35, 1894) records a case of pernicious anemia where he employed subcutaneous injections of salt water with excellent results. Two injections in all were given, each containing 825 gms. of the following solution:

Cooking salt.....	4	o	℥ j
Bicarb. soda.....	3	o	grs. xlv
Distilled water.....	1000	o	℥ xxx j ℥ ij

An improvement set in immediately after the first injection; the sensation of obscuration of sight disappeared, the somnolence decreased, and the appetite increased. Immediately after the second one the pulse became stronger and fuller, as well as slower, the abnormal sensations of taste and smell vanished, and on the third day, after this second one, the appetite was decidedly ameliorated and the general condition greatly for the better. Three weeks after he was able to be about.

ANTISEPTIC EYE SALVES.

Dr. Bach (*Lo Sperimentale*, No. 35, 1894) has experimented with a number of antiseptic eye-salves especially those with vaseline as a base, and he finds them of undoubted value on account of their decided antiseptic action. Those of iodoform, boric acid and yellow precipitate are however, without antiseptic properties. On the contrary, one of the bichloride, 1:3000 or the nitrate of silver, 2 per cent. will destroy the germs in a short time. These properties are not affected by mixing with other liquids as a solution of common salt or tears which is of great practical importance. Vaseline he has found to be a very poor soil for germs for it will remain sterile for a long time, and does not become rancid. Therefore, he advises heartly eye salves in preference to collyria, particularly, where the patient is to apply them at home.

BACTERIOLOGICAL NOTES.

THE BACILLUS OF THE PLAGUE IN CHINA.

The discovery of Kitosato of the specific cause of the plague which has caused such frightful epidemics in China, has already been announced. It was found that this terrible disease was one of the "filth diseases," and caused by a micro-organism which belongs to the septic bacteria. Yersin (*Ann. Inst. Pasteur*, VIII, 1891, p. 662) gives the results of further investigation of this organism. He found that the enlarged lymphatic glands in this disease contain large numbers of a short, stumpy bacillus with rounded ends. It stains readily with ordinary aniline dyes but does retain the coloring matter when treated after the Graus method. Frequently a polar stain is observed. Not infrequently a capsule is observed. It is easily cultivated on agar, glycerine-agar, blood serum, and in bouillon. The best medium was found to be composed of two per cent. alkaline peptone and one to two per cent. gelatine. In these cultures this organism appears on microscopic examination, as short chains of bacilli, with bulgings in some places. Involution forms are frequent, especially in old cultures.

The pathogenesis of this organism is quite marked. Rats, mice and guinea-pigs when inoculated with the bubo-pulp invariably die with lesions characteristic of the disease and containing the bacilli in large numbers in the glands. The first tubes inoculated develop very slowly, but subsequently the cultures grow more rapidly but the virulence of the bacteria is diminished. By continued subcultivation they become innocuous for experimental animals. Feeding experiments showed that the disease could be produced by feeding as well as by inoculation. The specific bacillus of this disease has been found in flies and in the surface soil to a depth of from 4 to 5 cm.

IMMUNITY AS ILLUSTRATED BY EXPERIMENTS WITH CHOLERA.

Metschnikoff (*Ann. de l'Inst. Pasteur*, 1894, pp. 529-89) discusses the subject of cholera and vibrios in relation to immunity and intestinal cholera. The conclusions reached are of considerable interest and are appended without further reference to the details of his investigations:

1. "Local immunity cannot be explained by particular conditions which prevent the microbe from living, for it may be found beyond the cholera area and in places quite free from it.

2. "Local immunity cannot be regarded as an unconscious and permanent vaccination of the inhabitants.

3. "The blood of persons residing in exempt places does not protect against Koch's vibrio.

4. "The injection of cholera cultures does not protect.

5. "The development of the cholera vibrio is considerably affected when growing in association with other microbes.

6. "The immunity of animals to intestinal cholera is in a great measure due to the inhibitory influence of the flora of the gastro-intestinal canal on the cholera vibrio.

7. "As long as young rabbits are being suckled they are very sensitive to the cholera vibrio, and this cholera is aided by the action of certain microbes.

8. "Young guinea-pigs are less sensitive than young rabbits to intestinal cholera.

9. "Young rabbits cannot be vaccinated successfully against intestinal cholera either with sterilized or living cultures.

10. "Young rabbits may be occasionally vaccinated successfully by means of the serum of animals vaccinated against cholera peritonitis. Normal horse serum is useless.

11. "The attempts to prevent cholera by means of microbes have shown that bacteria exist in the alimentary canal in-

hibitory of the cholera vibrio, but at present the results are inconclusive.

12. "In the immunity and receptivity of man and animals to intestinal cholera, the microbic flora of the alimentary canal plays an important part. Relying on this fact we may readily reconcile the fundamental truth that the vibrio of Koch is the specific cause of cholera with the data of epidemiology, especially with the influence of places and time on the progress of cholera epidemics."

INVESTIGATION OF COW-POX.

At the meeting of the Association of American Physicians, in Washington, D. C., 1894, Dr. H. C. Ernst of Harvard Medical College, read a paper on the bacteriological investigation of cow-pox. The material was largely from the work of Dr. Martin (deceased). A large number of cultures were made from the pustules and bacteria isolated with which the disease was produced in calves but rarely in children. The outcome of these investigations is briefly stated in the results formulated by Ernst (*Transactions Association Am. Physicians*, 1894):

1. "The germ of cow-pox is a bacterium.

2. "This bacterium is, in different stages of development, in the form of a coccus or of a bacillus.

3. "It can be isolated and grown in pure culture on blood-serum at the temperature of the blood.

4. "Inoculation on the calf from such cultures readily produces the typical cow-pox, while inoculations in man have, so far, produced typical cow-pox but once in eleven times."

Dr. Ernst continues that, all that remains to be done now is to find under what conditions to grow pure cultures that may be uniformly relied upon for vaccination in man.

PROTOZOA IN VARIOLA.

Siegel (*Deutsch Med. Woch.*, 1893, No. 2, p. 29) injected vaccine lymph into the peritoneal cavity of a calf and produced nodular excrescences on the omentum of this animal, which on cultivation yielded cocci. These micrococci when injected into the skin of calves produced pustules, but they were in no way comparable to the vaccine process. Löeffler, in 1890, described protozoa and zoospores in the substance of, and between the epithelial cells from pock. These bodies have been looked upon by certain pathologists as nuclei and parts of nuclei, or more or less altered fragments of the epithelial cells.

OUT-OF-THE-WAY MEDICAL PRACTICE.

Those whose duties lie in towns where locomotion is easy, and where even night visits can be made in comparative comfort, can hardly realize the difficulties of medical practice in sequestered spots, and among sparsely populated islands. An apt illustration came under our notice last week, which will doubtless interest our readers to recapitulate. During a gale on Sunday night, a fire an the south end of Ailsa Craig, a bare and desolate rock in the middle of the Firth of Clyde, and the return of a homer pigeon, intimated that a doctor was wanted on the rock. As the weather was stormy and a heavy sea running right in the face of the Craig, it was deemed necessary to send off the life-boat, as an ordinary fishing boat could not have effected a landing. Consequently, Dr. Alex. McDougall, of Girvan, Aryshire, was taken out in the life-boat at 11 P.M. With some difficulty he was landed and found that one of the lighthouse keeper had been blown down by the gale and that three of his ribs were broken. The life-boat returned with the doctor at 10 A.M. next day after a dangerous trip of eleven hours; a professional visit rather out of the common run, and not far removed from heroism.—*Med. Press.*

CORRESPONDENCE.

ADVISABILITY OF VACCINATION DURING THE EXISTENCE OF A SKIN ERUPTION.

EDITOR MEDICAL AND SURGICAL REPORTER:

DEAR SIR:—The question as to the advisability of vaccinating a person during the course of an eruption of the skin having been frequently in evidence, I take the opportunity at the present time to make answer through the medium of your journal. Within the past few months the question certainly has arisen more than at any other time owing to the apparent fear that we would be visited by an outbreak of variola. It is certain that the patients themselves often fear vaccination during the existence of the skin condition, because of the danger of making their feelings much worse than they have been with the cutaneous manifestation. While this is to a certain extent well founded, I do not think any one will be afraid when they are aware that no danger to life will intervene. Within the passed few days the question has been asked by the parent of a child having psoriasis, he stating that wherever the child was bruised he would be confronted with a new psoriasis lesion in a few days. Naturally one would hesitate before giving a positive opinion in such a case, on account of the supposed idea that psoriasis often occurs after wounds of any character. Having been asked an opinion in this case I did not hesitate to give the following advice, that I thought it would not be inadvisable to vaccinate. And I cannot hesitate to give the same opinion in cases of any eruption of the skin. I would advise that vaccination be performed in any case of an eruption of the skin. J. ABBOTT CANTRELL, M.D.

315 South Eighteenth St., Phila.

MORPHINISM IN CHILDREN.

EDITOR MEDICAL AND SURGICAL REPORTER:

SIR:—I am desirous of adding to the clinical literature of morphinism in children, and if any reader of your journal has noted a case and will send me details, I'll appreciate the favor and give full credit.

J. B. MATTISON,

Brooklyn, N. Y.

THE INFLUENCE OF ALUM, ETC., ON DIGESTION.

It is generally believed that aluminum compounds, which have been used extensively in the adulteration of flour and in baking powders, both impede digestion and have an injurious effect on the digestive organs. In a recent series of experiments by Bigelow and Hamilton (*Jour. of the Amer. Chem. Soc.*) the influence of these compounds was studied, not only upon the digestive action of pepsin and hydrochloric acid, but also upon artificial digestion in pancreatic juice. Alum interfered materially with the action of the gastric juice, but the pancreatic juice effected the digestion of the remaining portion of food, which should have been digested by the pepsin. The same was true of the digestion of matters containing aluminum hydroxide. The action of aluminum phosphate was quite different, however, for notwithstanding the supposed insolubility of this compound, ten or twelve per cent. of the albuminoids which were digestible in the presence of alum or aluminum hydroxide appeared to be insoluble in the presence of an equivalent amount of the phosphate.—Ernest Ellsworth Smith, Ph.D.

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SATURDAY, MARCH 23, 1895.

EDITORIAL.

TENEMENT HOUSES AND PUBLIC HEALTH.

The New York Legislature of 1894 enacted a law authorizing the Governor to appoint seven citizens and residents of New York, as a committee, to be known as the Tenement House Committee, to make careful examination into the tenement houses of the city of New York; their conditions as to construction, healthfulness, and any other phases of the tenement-house system that affect the public welfare. This committee has made an elaborate report. It went about its work in an intelligent manner, seeking through every possible avenue information upon the subjects referred to it for consideration. The questions considered and answered in the report have a vital lesson for every city of any considerable population, especially for those of commercial importance, for ports of entry, and wherever there is homed or housed a large foreign element.

While the local conditions affecting tenement-house life in New York may be somewhat unique, the same conditions, to a greater or less degree, exist in all great centers of population. In all our great commercial cities there are large foreign and native populations crowded into extremely narrrow limits. The report puts the facts strongly, and their truths will apply to Philadelphia as well as to New York:

"The personal observation of the committee and the testimony of numerous witnesses show that the over-crowding of the population, both as to house and district, has evil effects of various kinds; keeping children up and out of doors until midnight in warm weather because the rooms are almost unendurable; making cleanliness of house and street difficult; filling the air with unwholesome emanations and foul odors of every kind; producing a condition of nervous tension; interfering with the separateness and sacredness of home life; leading to the promiscuous mixing of all ages and sexes in a

single room, thus breaking down the barriers of modesty and conducing to the corruption of the young, and occasionally to revolting crimes."

The law must regulate these matters, they cannot safely be left to the landlords. In their greed for excessive rents, landlords would consent to crowding the rooms of their tenement houses with human beings layer upon layer. The law only, and that vigorously executed, can secure and regulate more favorable conditions for the future tenement house. It is startling to reflect that eight-fifteenths, or a little over one-half of the total population of the great city of New York, live in what are generally called tenement houses. This reckoning does not include the better class of rented houses. The death rate of these houses is very much higher than in single houses. Rear tenements are veritable slaughter houses of children. These are generally cut off from air and sunlight; the buildings old, dark and damp; decay and long occupancy have pervaded every nook and corner, have permeated their very walls with the seeds of disease.

One best known cause operating to increase the death rate, is density in population. One of the best means for minimizing the evils of overcrowding is by letting in more air and sunlight; this in the interest of both public health and public morals. This end can be served by numerous judiciously distributed and well arranged park spaces. Pure air and strong light render impossible many evil conditions. In the distribution of these rest, recreation, play-ground spaces, consideration should be given to the matter of their proximity to our public schools. These institutions for the development of vigorous men and women too often are destitute of room for recreation and healthful exercise. This is *criminal.*

Here in Philadelphia, we have, along the Delaware and Schuykill rivers, extensive shore lines; and it would be practicable and certainly greatly contributive to public health, comfort and pleasure, to have small parks connected with some of the many docks along the shores of these rivers. Thus supplying healthful conditions; letting in air and sunshine; furnishing places of rest and recreation for all classes, and breathing places and playgrounds for those who cannot often get out into our greater suburban parks. Such parks could be so located as not to interefere with commercial interests. In addition to the importance of these small parks as health requisites, as inlets of light and air, they would add greatly to the beauty of the city. Many sections along the rivers named are overcrowded; many of them are tenement localities with dense populations in need of breathing spaces, for men and women, and playgrounds for children. Nothing better could be supplied than the refreshing, healthful air of the rivers. "There is no reason in humanity why an enormous portion of our population should be permitted, year after year and generation after generation, to live without those alleviations which the health and comfort of the people require and civilization demands."

Such parks should be established with strict regard to local conditions; to system and science; to character of buildings, density and character of population

Further, where the population is densest there is the least personal, household and general cleanliness—the chiefest factor in promoting individual and public health. The principle obtaining in aseptic surgery should be given a more general application.

The importance of these facts are growing to be more fully realized. There is a growing demand for more municipal bath-houses. The basin or tub will no longer answer the demand. The report we refer to very strongly puts the case in relation to these baths:

"The freer use of water by the tenement house population would aid them very materially in their struggle for existence, by assisting the elimination from their systems of the poisons absorbed in the sunless and airless dwellings. That several hundred thousand people in the city have no proper facilities for keeping their bodies clean is a disgrace to the city and the civilization of the nineteenth century. These facilities have been used and are abundant in many enlightened nations, and they are being increased in every way possible. The amount of money annually spent for charity amounts to millions, and the question arises whether it be not greater economy to spend more for the preservation of health and the prevention of disease, because less would then be required for the support and care of the sick and helpless. The cultivation of the habit of personal cleanliness has a favorable effect, also, upon character; tending to self-respect and decency of life."

Dr. Albert Shaw states that municipal baths have been a great success wherever established in Europe.

"The public baths of Glasgow are six or seven in number, and have cost probably $600,000, or in round figures, $100,000 for each establishment. They contain great swimming tanks for men and women separately, and have every kind and sort of tub, shower and special baths, and offer very special inducements to school children. A small charge is made, school children in some of the towns not paying more than half a penny, one American cent, for a bath." These baths are so conducted as to make them nearly or quite self-supporting.

These questions are all of urgency, and should receive the prompt and enlightened consideration of state and municipal authorities. With greater precautions and wiser provisions for the public health, there will be less demand upon private and public charity, fewer drafts upon State and municipal treasuries for the support of public institutions. Economy, humanity, every consideration of the public welfare appeals to legislative and municipal authority to do more along the lines suggested and less to promote the enterprises of Professional Philanthropy.

PETITS SOINS.

A little care and effort on the part of mother or nurse will often give a child that chiefest beauty in a face, fine eyelashes. While the baby is asleep on the knees, if there is any tendency to inflammation or redness, she can softly bathe the eyelids with diluted witch-hazel, quite warm, or with a mixture of half a dozen drops of spirits of camphor with two teaspoonfuls of borax and four ounces of water. The borax, however, although exceedingly soothing and purifying, has a tendency to create dryness, and this has to be counteracted by rubbing in with very gentle motion some soothing and enriching ointment—cold cream, vaseline, mutton tallow, or even common lard that one has "tried" over one's self to make sure of its purity. This ointment should be applied very delicately, as it is apt to promote the growth of hair, and the hair is desired nowhere but on the brows and lids. Often when the lashes are thin and short, pale and irregular, showing little strength, a nightly application of vaseline will do them a great deal of good, the richness being absorbed by the capillaries, and reappearing in a longer and stouter growth of lash; and vaseline or some pure emollient oil rubbed at night along the brow will take out all stiffness from the shorter hair there, darken the color, and make the arch, which is often but half finished, more complete. Although in Colonel Higginson's *Malbone* some one suggests that Emilia's eyelashes are too long for anything but full dress, yet in truth no eye ever has a lash too long for beauty, the length and thickness and lustre of the lash giving shadow that means darkness, and lifting of the shadow that means brilliancy.—*Harper's Bazar.*

ABSTRACTS.

REPORT OF CASES OF OPIUM-POISONING SUCCESSFULLY TREATED BY PERMANGANATE OF POTASSIUM.

Dr. William Moor, of New York, (*Med. Record*, March 2, 1895) gives an account of some cases of opium-poisoning, which were reported to him, together with one occurring in his own practice.

CASE I., reported by Dr. T. S. Buist, of Charleston: "On February 13, 1894, at 12 M., I was called in haste to see a young woman (white), nineteen years of age, who had taken by accident one and a half ounces of laudanum. The poison had been taken at 10 A.M. The first medical aid arrived at about 11 o'clock. Condition upon my arrival: Pupils of both eyes contracted to the finest possible point, eyes dull and glassy, dropping of eyelids; insensibility to external impressions, pulse slow and intermittent, respiration slow and labored; almost utter inability to sustain the body upon the limbs. At once a hypodermic injection of one-sixteenth grain of atropine was given, and the result watched with the utmost interest. At the end of thirty minutes all symptoms were aggravated. I ordered as soon as could be procured: Potass. permang. gr. vj.; Aq. destill. ʒ j. At 12.45 I injected ten drops of this solution in the arm. In ten minutes the patient's locomotion improved. In fifteen minutes she spoke and begged to be allowed to sleep. Pulse stronger, respiration more regular. Allowed to rest in a chair for five minutes, profound sleep coming on. Patient aroused and ten drops of the permanganate solution introduced in the other arm. The effects in ten minutes were wonderful. Susceptibility of the pupils to light manifest, consciousness returned. Patient in fifteen minutes hysterical and crying; pulse, 76; respiration, 20 per minute. By six o'clock in the evening all symptoms had passed away and a complete recovery was the result."

CASE II., reported by Dr. Edwin De Baun, of Passaic, N. J.: "On March 3, 1894, at two o'clock in the morning I was awakened by a man who told me he had swallowed seven grains of morphine by mistake for quinine, a half hour before. While relating his experience at first he seemed very lucid, but on further questioning him his speech became thick and he began to sway from side to side, and implored me to be quick, as the drug was taking rapid effect. I told him to walk about the room, while I went to the inner office and prepared twenty grains of the sulphate of zinc in solution. On returning I found my patient on the floor on his hands and knees trying to keep his head from striking the floor. I raised him, gave him the sulphate of zinc, sat him on a chair and returned to the office for permanganate of potassium. I dissolved ten grains of it in half a glass of water, which only took a few minutes, and when I again returned to my patient, he was lying on his back on the floor, having fallen from the chair where I left him. I administered the permanganate solution, again raised him and placed him upon a chair where I could watch him, while I telephoned for Dr. A. C. Pedrick and sent for two policemen, who took the man into the open air. In the meantime the stomach-pump was made ready. After walking the man a short distance, he went so rapidly under the influence of morphine, that they were obliged to carry him back. We sat him on the back stoop and by this time Dr. Padrick arrived, and together we tried the time-honored stomach-pump, which, of course, did not work. We gave him twenty grains more of the sulphate of zinc, which did not act. In a few minutes the man was in a profound stupor, and nothing but the severest handling could arouse him, and then only to elict a groan, there being no voluntary motions. It was now impossible to administer any medication by the mouth. Therefore we determined to wholly rely on the efficacy of the permanganate of potassium, hypodermically. Three grains were administered by means of a two drachm aspirator, thinking that the more dilute the solution, the less irritating to the tissues.

The first hypodermic was administered one hour and a quarter after the morphine was taken; the second hypodermic in fifteen minutes, and the last hypodermic fifteen minutes later, using in all, hypodermically, nine grains, which made a total of nineteen grains. It was not until the last hypodermic that he showed signs of voluntary motion, and this was only evinced by raising his leg and scratching it. He soon regained consciousness, and was able to answer questions intelligently, although when left to himself each time would lapse into a sleeping condition, from which it was difficult to arouse him. He was taken into the house and one-half hour later was able to walk with the assistance of the two policemen. He was now walked to Dr. Pedrick's office, a distance of about five blocks, where he stayed during the remainder of the day, and made a rapid recovery."

The fact that the emetic did not act, and the stomach-pump did not work, and as it was impossible to either walk the man or arouse him by violent manipulations, shows conclusively that the permanganate of potassium must have saved his life.

Before reporting my own case I shall give an account of some animal experiments, the reason for which will be readily understood. As the reader has noticed, the permanganate in Case I. was administered only hypodermically. In a private letter which Dr. Buist directed to me he refers to some reports regarding animal experiments I undertook. Those reports were premature, and I must confess I was surprised when I heard of Dr, Buist's case and of other cases in which the antidote apparently was effective, even if given hypodermically. Still I remained sceptical and left it to comparative experiments to determine whether or not the much discussed chemical body had any antidotal virtues with regard to opium if administered hypodermically.

As to those premature reports alluded to, the simple truth about them is as follows: Having found that the antidote would select morphine in the presence of albumin and other organic matter, it came to my mind that this selective power would also manifest itself upon morphine which was held in solution by blood, the latter being principally a solution of albuminous matter in water, and that, therefore, intravenous injections of the antidote might be useful in cases of opium poisoning. In order to substantiate this idea I gave a good-sized rabbit a hypodermic injection of one grain of morph. sulph., followed in fifteen minutes by an intrajugular injection of three-fourths of a grain of potass. permang. (1 to 15), and sixteen minutes after this by another intrajugular injection of one-third of a grain of $Mn_2O_8K_2$. Two hours after the initial injection of morphine, the animal's respiration was 46 per minute, rising to 48 after three hours more.

Another rabbit of the same size also received one grain of morphine, but no intrajugular injection of permanganate. Thirty minutes later the animal's respiration was 14 to the minute and one hour after this only 12. Five hours after the injection of morphine the animal still breathed only 14 times per minute. The normal respiration of rabbits is 70 to 90 per minute. The intravenous injection of the antidote, therefore, was unquestionably of benefit to the animal thus treated.

To determine the value of hypodermic injections of permanganate in cases of opium poisoning, I used four good-sized rabbits, each weighing about three and one-half pounds (avoirdupois) — 1,585 grammes. By giving them hypodermic injections of morphine followed by injections of potassium permanganate, and at a subsequent period only injections of morphine, I was able to draw conclusions as to the value that hypodermic injections of the antidote would have on morphine that was absorbed into the circulation.

RABBIT I.—Received two grains of sulphate of morphine hypodermically at 9.22 A.M., March 1, 1894. Respiration extremely rapid, from fright. At 9.28 I injected four grains of $Mn_2O_8K_2$ in one drachm of water. At 9.32 respiration 120 per minute. At 9.45 the animal is semi-lethargic, but his ears are erect; breathing a great deal slower (50 per minute). After this his breathing gradually improved, being 64 at 10.12, and 60 at 10.22 A.M.; 10.26 A.M., injected two grains of potassium permanganate in one drachm and a half of water; 10.36 A.M., respiration, 76, semi-lethargic, ears erect; 11.15 A.M., respiration, 76; 12.40 P.M., respiration, 153; 1 P.M., respiration, 160; 1.25 P.M., respiration, 150; animal struggling vigorously if held suspended by the

ears, general appearance of the animal not lethargic; 2 P.M., power of locomotion begins to return; 2.30 P.M., locomotion much improved; 7 P.M., locomotion entirely restored; 11 P M., respiration exceedingly rapid, about 200.

March 2d, 8 A.M. The animal drinks water with avidity and takes food; is quite lively; respiration normal (95).

RABBIT I.—Injected two grains of morphine sulphate on March 4th at 1 P.M. At 2.45 P.M., the animal is in a completely lethargic condition; respiration, 26 per minute. At 3.25 P. M., slower, 22; 4.20 P.M., respiration, 21; 5.10 P.M., the same. At 5.50 P.M., the animal is still unable to move voluntarily, but breathes somewhat faster (24). At 7.45 P.M., the power of locomotion begins to return, breathing easier and quicker, being 70 per minute. At 11 P.M., the breathing is somewhat slower (62).

March 5th, at 8 A.M., the condition of the animal is about normal.

Thus we see that the administration of $Mn_2O_8K_2$ resulted in a decided improvement in the breathing and general condition of the animal. The difference between the results of the two experiments as regards the number of respirations per minute is certainly striking. The heart-action in these two instances and also in the following experiments did not offer any characteristics:

RABBIT II.—Injected on March 2d, at 9.14 A.M., two grains of sulphate of morphia. Respiration, 170; 9.18 A.M., animal is somnolent, lies flat on its abdomen, ears flat on the back; 9.20 A.M., repiration, 31; 10 A.M, respiration, 22; the animal is perfectly motionless if suspended by the ears; 10.8 A.M., injected three grains potassium permanganate (1 to 15); 10.16 A.M., injected three grains more of the potassium salt; 10.22 A.M., respiration, 32; 11 A.M , somewhat less (30); moves about at times; 12.15 P.M., breathing slow (16); 12.25 P.M., injected two and a half grains of permangante; 12.40 P.M., breathing improved (27); the animal struggles quite vigorously if held by the ears; is much less lethargic; moves about voluntarily; 12.50 P.M., respiration, 34; 1.20 P.M., animal moves about if put on the floor, power of co-ordination quite fair, tries to escape when approached; 1.45 P.M., breathing faster (38), regular; 2 P.M., respiration, 45, regular; locomotion normal; hardly any signs of lethargy; 9 P.M., respiration, 58, animal is quite lively, drinks some water.

RABBIT II.—Injected on March 6th, at 11.20 A.M., two grains of sulphate of morphia; 11.50 A.M., the animal is completely lethargic, eyes glassy, breathing slower (38); 12.43 P.M., respiration, 22; 1.30 P.M., still less (19); 4.30 P.M., respiration, 14; does not struggle if held up by the ears; 11.30 P.M., locomotion improved. The animal was found dead at 7.30 A.M., March 7th.

RABBIT III.—Injected two grains of sulphate of morphia on March 3d, at 8.20 A.M.; 9.55 A.M., completely lethargic; respiration, 20; 10 A.M., injected four grains $Mn_2O_8K_2$ (1 to 15); 10.20 A.M., respiration, 31; 10.27 A.M., injected four grains of the potasssium salt; 10.43 A.M., the animal is much less lethargic, moves about voluntarily, struggles vigorously when held by the ears; 11.13 A.M., respiration, 50; 2.30 P.M., much slower (26); 3 P.M., injected four grains potassium permanganate; 3.05 P.M., respiration, 30; 5.20 P.M., faster (47); 10 P.M., the animal is asleep, but the slightest disturbance will awake it; when held by the ears it struggles vigorously. Locomotion fair, showing perfect co-ordination; 10.20 P.M., the animal being disturbed ran fast a distance of sixteen feet.

March 4th, 8 A.M., the animal is quite lively and well.

RABBIT III.—Injected two grains of sulphate of morphia on March 6th, at 11.30 A.M.; 12.30 P.M., respiration, 200; 1.35 P.M., respiration, 48; 4.35 P.M., respiration 40; lethargic; 11.30 P.M., the animal breathes fast (90).

March 7th, 8 A.M., the rabbit is drowsy, but breathes very rapidly (130); 10 A.M., still drowsy; 3 P.M., same condition.

March 8th, 8 A.M., respiration labored (84), becoming more and more difficult and slow; 8.10 A.M., the animal is in extremis, has convulsions, shrieks peculiarly five or six times, dies at 8.15 A.M.

Thus rabbits II. and III. succumbed to two grains of morphine when no permanganate was used to antidote the morphine.

RABBIT IV.—March 6th, 12.30 P.M. Injected three grains of sulphate of morphia; 12.35 P.M., four grains of potassium permanganate; 12.40 P.M , respiration, 80; 12.55 P.M., respiration, 40; 1 P.M., semi lethargic; 1.05 P.M., four grains

$Mn_2O_8K_2$; 1.16 P.M., respiration, 42; 1.40 P.M., respiration, 35; locomotion fair; 2.50 P.M., respiration, 24; able to move voluntarily; 3.05 P.M., four grains potassium permanganate; 3.20 P.M., respiration, 32; 3.40 P.M., respiration, 40; 11.20 P.M., respiration 62; the animal is quite lively, locomotion perfect.

March 9th, 8 A. M., the animal is perfectly well; respiration 74.

RABBIT IV.—Recived an injection of three grains of sulphate of morphia on March 11th at 11.25 A. M.; 11.40 A. M., completely lethargic; respiration, 26; 1.15 P. M., respiration, 24; 4.45 P. M., respiration, 22; completely lethargic. At 7 P. M. the condition of the animal is greatly improved.

March 12th, 8 A. M.—Recovery complete.

A comparison of these last two experiments will show that the injection of the antidote were of decided benefit, inasmuch as they were always followed by improvement in the breathing and the general condition of the rabbit. From an unbiased consideration of the foregoing eight experiments I was justified in concluding that hypodermic injections of potassium permanganate are of great value in opium-poisoning. The question arises, how does the antidote act when thus administered?

When we consider, on one hand, the wonderful affinity of $Mn_2O_8K_2$ for morphia, and on the other hand, the rapidity of the circulation, it appears quite intelligible that the antidote should select the poison in question from among the albuminous ingredients of the circulating blood, and thus render it harmless. Of course, part of the permanganate will be deoxidized before it can enter the circulation but evidently enough of it is absorbed to accomplish its wholesome mission.

I relate a case of opium-poisoning which occurred in my own practice.

CASE III.—On April 6, 1894, at 8 A.M., I was sent for by Dr. Henry Altschul, of this city, to assist him in a case of morphine poisoning. On my way to the place I procured one ounce of a 1 to 15 solution of potassium permanganate (gr. xxxij. to ℥j. aq.). On arriving I found the patient, a young man of twenty-four years of age, in a condition of absolute insensibility, resembling a corpse. His face was livid; his pupils contracted to the size of a pin's point; his respiration—four times per minute—spasmodic and stertorous; his pulse slow, rather full. It was utterly impossible to arouse him or to make him react to any external impression. Dr. Altschul had been with the patient since 7 A.M., resorting to artificial respiration, injections of apomorphine, which produced no emesis, and giving strychnine and atropine hypodermically. As the patient was naturally unable to swallow, I sent to the nearest pharmacy for a medium-sized hard rubber catheter, also a piece of rubber tubing about one-half of a foot long, into which the catheter should fit, and for a glass funnel to fit into the rubber tubing. Meanwhile, in order not to lose time, and having in my mind the results of the animal experiments cited above, I gave the patient a hypodermic injection of 50 minims of the antidotal solution (3½ grains of potassium permanganate). This was at 8.30 A.M., half an hour after I was called. At 9 A.M. I administered 15 grammes of the original permanganate solution (16 grains of the antidote), diluted with a cupful of water. This I did by introducing through the patient's nose into his œsophagus the hard rubber catheter, which I had connected with the glass funnel by means of a piece of soft-rubber tubing, and by slowly pouring into the glass funnel the diluted antidotal solution as mentioned above. At 9.30 A.M., the patient's respiration had risen to eight per minute; but it was still impossible to arouse him. I therefore gave him another injection of 50 minims of the permanganate solution. A few moments later he gave the first evidence of returning locomotion power by violently tossing with his legs. Soon after this he began to show signs of returning consciousness. At 10.15 A.M. the patient could be made to walk with the assistance of two men. A few minutes later he cried bitterly, embraced and kissed his father, and answered rationally questions that were put to him by those present. Then he asked for black coffee and accepted a cigar, which he smoked vigorously and seemed to enjoy. By questioning him we found out that he had taken, at 6 A.M., one drachm of powdered opium, and for this purpose had filled thirteen gelatine capsules (No. II.) with the opium. We

found the empty drachm box at the place indicated by the young man.

At 11 A.M. I gave him seven or eight grains more of the antidote per os, and left him in my colleague's care. The next morning, April 7th, he was practically well and wanted to leave the house in order to make a business call.

Such a quick recovery after such a quantity of poison ingested—sixty grains of opium—and after a fatal issue had seemed almost inevitable is so remarkable that it fully justifies my claim set forth, that permanganate of potassium is the antidote par excellence for opium.

CASE VI., occurring in Pittsburg, Pa., reported through the kindness of Dr. Robert P. Finley, of Altoona, Pa.—Patient had taken three ounces of laudanum and was brought to the hospital in a moribund condition, three hours after having taken the poison. No reflex response, respiration four to the minute. As a last resort, after every other means had failed, eighteen and three-quarter grains of potass. permang. were given hypodermically, in the space of two hours and fifty-five minutes. In four hours from the first injection he was perfectly conscious, complaining only of sleepiness.

Up to this date I am cognizant of twenty-one cases of opium-poisoning, in which the therapeutic agent recommended by me as an antidote has been used with unmistakable success, although it is fair to assume that many other cases were not reported.

In the *Canadian Practitioner*, September, 1894, there appeared an able article from the pen of Professor Graham Chambers, of Toronto, in which he comes to the same conclusions I put forward in my original article on the subject. There is only one point on which my opinion differs from that of Professor Chambers. He says $Mn_2O_8K_2$, subcutaneously, is poisonous. Now I have shown that rabbits stood hypodermic injections amounting to twelve grains without any deleterious effect, and in the case reported by Dr. R. Finley (Case IV.), the patient had received nearly nineteen grains hypodermically. The mere fact that dogs are as susceptible to the action of manganese does not prove that $Mn_2O_8K_2$, given hypodermically in moderate doses to man, would have any toxic effect. Facts point to the contrary. I might state here that Dr. De-Baun's suggestion (see Case II.). to dilute the antidote for hypodermic use as much as possible, is an excellent one; one grain to one drachm of water seems to me a good proportion. Of course, for its use per os, it should be diluted in a much greater proportion, so as to bring in contact with it as much of the walls of the stomach as possible.* It might, perhaps, not be unimportant to emphasize once more, in order to avoid mistakes, that permanganate of potassium is not an antidote for all kinds of toxic substances. I have clearly demonstrated that it has absolutely no effect upon atropine, hyoscyamine, hyoscine, cocain, veratrine, pilocarpine, aconitine, that it could not be depended upon in strychnine-poisoning, in poisoning by oxalic acid and colchicum preparations. I have also shown that even after sixteen hours of contact, phosphorus was not oxidized by potassium permanganate. In connection with this it is highly interesting to know that "peroxide of hydrogen, with all its energetic oxidizing action, has no effect on phosphorus, a substance which is so readily oxidized by the air."

In addition to the foregoing, I found that $Mn_2K_8O_2$ has practically no effect upon muscarine and caffeine, especially in the presence of albuminous matter, and just a little oxidizing power over hydrocyanic acid, although, strange to say, it at once decomposes cyanide of potassium.

Eye-Strain a Cause of Nocturnal Enuresis.

Dr. George M. Gould reports a number of cases of children who were afflicted with nocturnal enuresis, that were cured by correction of the ocular defect by glasses. In most of the children the involuntary urination was accompanied by many other nervous symptoms, such as night terrors, headaches, chorea, etc., nearly all of which were also relieved or cured by glasses that corrected the visual anomaly. Some of the patients had undergone operations and treatment that had extended over years without relief of the trouble.—*Med. News.*

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*It is now a well-established fact that the mucous membrane of the stomach secretes morphine which had been absorbed into the circulation, and that this secretion continues for many hours.

A MEDICAL VIEW OF MODERN FICTION.

The American Medico-Surgical Bulletin thus editorially discourses on this interesting subject:—

"Among physicians, 'The Heavenly Twins' is looked upon, not as a literary venture to be judged by artistic standards, but as a readable presentation of symptoms which suggest definite pathological conditions.

"'Ships that Pass in the Night,' is admirable as a pulmonary record, and 'The Yellow Aster' affords an insight into the psychic phenomena resulting from neglect of natural instincts and desires, which, surviving the appropriate period of life, subsequently assert themselves in the form of belated maternal love and *ex post facto* philoprogenitiveness.

"In the latter work, the mother of the heroine allows her children to grow up without receiving a single sign of maternal tenderness, but is overtaken before her death by a most singular form of retribution—a sudden and consuming desire for the society of babies and on overpowering craving to lavish upon children the accumulated stock of motherly love which had not found its appropriate and seasonable outlet. Most of the infants in the neighborhood being provided with mothers, who supply the required amount of caresses, the unfortunate woman dies of a plethora of pent-up baby-talk and unexpended maternal affection, but is happily given time to warn her daughter against a similar fate.

"As to Miss Harraden's book, while we find it useful in the profession for its glimpses into refined sick room conversation and pulmonary *persiflage*, we regret, from a medical point of view, that after giving such a careful history of the heroine's case, the author permitted her to be killed by an omnibus. It is humiliating, after following attentively the course of the disease and the method of treatment, to be dismissed without hearing the result of the autopsy. Moreover, we found her style so delightful that we would have gladly followed the hero to his last hemorrhage; but that, too, was denied us.

"Sarah Grand's cases are open to the same objection of incompleteness. She starts out enticingly with such a character, for instance, as Edith's husband, but leaves the later and more interesting phases of his pathological history untold. As a general rule, however, she comes up to the requirement of modern fiction; the case of most of her characters can be diagnosed; and with a little more clinical experience we have no doubt that her future novels will be above reproach. She will stand unchallenged as the novelist of venereal diseases, just as Du Maurier is first in the fields of hypnotic romance, and Beatrice Harraden in the department of laryngeal and pulmonary complaints.

"There is danger lest, in the first stages of the medical movement in literature, young writers will attempt to cover too wide a pathological area in their novels and forget the inexorable law of specialism that obtains in the medical profession itself. The specialistic tendency in medicine must prevail in medical fiction or the results will be unreliable and superficial. There are neurotic episodes in Mrs. Grand's otherwise consistently venereal work, which we cannot condone. To introduce a paretic or ataxic patient in a dermatological novel would not only destroy the unity of the story, but would justly expose the author to a suspicion of a want of thoroughness. If the writer has determined upon appendicitis as his plot, he should not waste his energies upon irrelevant diseases in his minor characters. He could gain variety by introducing other forms of enteric disorders, but should never exceed the limits of the abdominal region. Until he has had a thorough medical training, we think the course of a single disease should supply him with all the medico-literary material that he can handle in an intelligent manner. A blow on the head supplied the author of 'God's Fool' with all the plot that he needed; Ibsen's 'Ghosts' is simply the dramatization of an inherited brain disease; and many a successful short story is based upon a case of simple mania with delusions. There will be time enough for the combination of various ailments in a single work when each of the departments of pathology has its special novel. The task will then be easier because the author can gather the fruits of the labors of others; but, at present, there is no excuse for such a sacrifice of unity and thorough-

ness. We have no novel of the ear, no drama of the digestive organs, no romance of the kidneys, no pastels of the intestines; and these are only a few of the countless fields for literary and artistic honors.

"There are some who will sneer at this, as if the organs of the human body were unfit themes for artistic literary treatment. Ridicule will be thrown on the pioneers of the movement; of course, that is to be expected; but they will persist, nevertheless, and eventually succeed. Not only will the novel of the future contain an ever-increasing amount of medical material, but there are signs of a similar tendency in poetry. Anatomical verse is even now not uncommon, nor is it without serious intent, as is shown by the following stanza describing the mechanism of phonation:

"'The larynx now goes up;
The pharynx with a slam
Ejects the note
From out the throat
Pushed by the diaphragm.'"

AN HISTORICAL CASE OF DIPHTHERIA.

The influence which epidemic disease has had upon the course of history is a curious subject for speculation, but most of the instances which have been adduced by various writers who have occasionally touched upon the subject, have been instances of wide-spread epidemics, such as the plague at Athens, and the "Black Death" in England; but the effect which certain infectious diseases, more or less constantly present in temperate climates, may have had upon historical events is less clearly perceived. A curious instance is afforded by the death of Napoleon Charles, Prince Royal of Holland, the son of Louis, brother of Napoleon Bonaparte and of Hortense, his stepdaughter. This child died, when not quite five years old, of a disease, which, there can be little doubt, was diphtheria. The boy was a favorite of his imperial uncle, and was generally taken to St. Cloud when Napoleon stayed there in the summer. Though Napoleon never seems to have expressed himself clearly upon the subject, it was thought by many that he proposed to make this child, who was his nearest male relative in the second generation, his heir. Among those who shared this opinion was Meneval, who, as private secretary to Napoleon, had special opportunities of forming an opinion as to the Emperor's intentions. If this child had lived, Napoleon, Meneval thinks, would not have divorced Josephine; would not, therefore, have exposed himself to be insulted by the Emperor of Russia's refusal of the hand of a grand duchess; and, in all probability, would not have gone to Moscow, and might therefore, very possibly have founded a lasting dynasty. It is curious to remember that this boy's brother — his uterine brother at least — did actually sit on the throne of France. Napoleon, who was very much moved by the death of his nephew, offered a prize of 12,000 francs to the author of the best work on the means of preventing and curing croup. The boy died on May 5, 1807, and Meneval remarks that the superstitious looked upon it as a curious coincidence that Napoleon himself died on the same day of the same month fourteen years later.—*New Orleans Med. and Surg. Jour.*

Removal of Tatoo Marks.

For obliterating tatoo marks Dr. Variot pours on the marked spot a concentrated solution of tannin, and works it into the skin by series of pricks just as in tatooing proper. A certain quantity of tannin is thus introduced beneath the skin. He then rubs the part with nitrate of silver, and allows the solution of the salt to remain in situ until the prick marks show out as black points. The caustic is then wiped off, and the result is the formation of a black stain of tannate of silver. Inflammation is set up, and in the course of a fortnight scabs form, on the disappearance of which no trace is left of the original design, the only souvenir being a reddish scar, which in time becomes less visible. Various other plans had been tried without success, scarification, the introduction of opaque powders and caustics into the skin, etc. The tannin, in his operation, acts as a mordant and in no case did he have to deal with troublesome suppuration, although if the area be large it is well to do a piece at a time.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

IN THE BUFFALO MEDICAL AND SURGICAL JOURNAL

Dr. Herman Mynten reports

A Case of Nephrectomy.

The patient was a man 22 years old who for 17 years had attacks of pain in the back and left lumbar region, and symptoms of renal calculus. During the last five months the symptoms had increased, and the patient had night sweats, lost greatly in weight, had a poor appetite and slight dry cough.

Tenderness on pressure was great in the left lumbar region—less, though present in the right, and no tumor could be found by careful palpation.

Under cocaine anesthesia a successful cystoscopic examination was made and a mass of pus seen to exude from the unhealthy orifice of the left ureter, while the right was seen to be normal.

After stimulation for a couple of days with strychnia, whiskey, nutritive enemata, etc., nephrectomy was performed under chloroform anesthesia and a badly diseased kidney containing over a pint of pus was found and removed. After the escape of the pus the remaining part of the tumor weighed twenty eight ounces.

Two large calculi were found in abscesses in different parts of the structure.

As soon as the immediate shock of the operation passed away the patient began to improve.

Two weeks after the operation a fecal fistula showed itself, due to the adhesions which had existed with the colon; but this healed in a couple of weeks. Great gain in weight began, and about two months after the operation the patient resumed work in a machine shop.

The case is interesting not only on account of the successful result in a case which had progressed so far before operation, but because the diagnosis made by the cystoscope avoided the exploratory incision which otherwise would have been necessary.

Dr. Clayton M. Daniels reports

Two Peculiar Cases of Hernia.

In the first case an Italian laborer was struck a severe blow which caused a painful swelling in the groin. Examination showed an undescended testicle which was removed, the speumatic cord being stitched into the internal abdominal ring to occlude it. In the second case a woman had been subject for some time to an inguinal hernia and attempting to use a new truss was caused so much pain by it that the author was sent for, and found a prolapsed ovary, which he removed using the ovarian ligament to close the inguinal canal as before, and in this way he thinks obtaining a permanent cure.

IN THE BROOKLYN MEDICAL JOURNAL

Dr. Calvin F. Barber gives his experience with some

Fatal Cases of Chorea.

This disease he states is frequently regarded as one of no vital importance unless some organic lesion is to be discovered. Physicians frequently order some trifling treatment and dismiss the case as a trivial affection. The author has seen some fatal cases, and in one in which an autopsy was obtained could find no lesion to account for the symptoms. The percentage of mortality he thinks much higher than it is commonly thought to be.

Dr. Louis C. Ayer gives a summary of his observations in the

First Four Months of Diphtheria Cultures in Brooklyn.

The tubes provided were not in general demand at first, and the cultures were frequently improperly made, or their return delayed so much as to make a satisfactory diagnosis difficult or impossible.

The diagnosis made by the physician was correct in the majority of cases, but in a considerable percentage it was wrong, sometimes diphtheria being diagnosed when absent, sometimes vice versa. The importance of having an absolutely certain diagnosis in these cases is of course self-evident, and increasing interest in the subject is being steadily shown.

JOURNAL OF CUTANEOUS AND GENITO URINARY DISEASES.

Dr. James Bell reports

Two Cases of Syphilis, Etc.

These cases are given to add to our information on the period of communicability of this disease.

In the first case a man, in otherwise good health, contracted a chancre, and in about three months, when the secondary symptoms were well marked, was given systematic general treatment under which all symptoms disappeared in about three months.

The treatment was continued however for a couple of years and the patient married a few months later. Two months after his marriage his wife developed a chancre, and this was followed by constitutional manifestations, more than two and one-half years after their total disappearance in her husband

In the second instance a man ended a farewell supper to his bachelor friends by getting intoxicated and then contracting a chancre which, however, did not develop until several weeks after marriage. The wife had meanwhile become pregnant and was put on constitutional treatment, although she showed no symptoms of infection. At turn she was delivered of an apparently healthy child.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Contribution to the Study of the Ætiology of Rheumatic Affections of the Body Due to Tonsilar Diseases.

Dr. H. L. Wagner writes in the *N. Y. Medical Jour.:*

The tonsil has been justly termed by Gerhard a physiological wound—an inlet into the system guarded by leucocytes, which we have learned of late protect the body against the invasions of various microorganisms. If through inherited or acquired predisposition the energy of these leucocytes is diminished, or if the tonsil in a diseased state does not allow these corpuscles to migrate, then a soil may be given for infectious diseases, such as diphtheria, scarlatina, amygdalitis, etc.

The sequences which sometimes follow these diseases are important to observe—paralysis of various parts of the body after diphtheria, and also articular rheumatic affections following follicular amygdalitis. The results gained by clinical studies and bacteriological investigations in follicular amygdalitis, followed by rheumatic affections, are what I particularly desire to refer to.

The question which presents itself is, whether these rheumatic affections are produced by the germs (*Staphylococcus albus et aureus*, Fraenkel's pneumococcus, etc.) migrating from the tonsillar tissues into other portions of the body, causing rheumatism, or whether they remain in or about the tonsils, sending forth and distributing their ptomaines or poisonous products into the system.

The results of my investigations which I will give you in brief, show in follicular amygdalitis a migration of these germs, proving that rheumatism here is not caused directly by ptomaines.

Clinical observations show that the joints which are mostly in use are the ones generally affected; for instance the arytænoid cartliages of the larynx of singers (five cases), the knee joints of shoe dealers, owing to the constant kneeling posture (two cases), and the wrist joint of a violinist, (one case) and bookkeepers (two cases). Referring to the two cases above mentioned, where rheumatism of the knee joint developed, the bacteriological investigation showed that the synovial fluid obtained by tapping of the joint contained the same microorganisms as were found in the diseased tonsil. I was also able to identify the same germs in the urine of nearly all the cases. The family and clinical history of all these patients showed no signs of rheumatism before the attack of this tonsilar disease.

Absorptive Power of the Vagina.

Coen and Levi (*British Medical Journal*), have recently made some observations on the absorptive power of the vagina under various conditions of health and disease. Iodide of potassium is easily absorbed. If a tampon soaked with a 20 per cent. solution be introduced into the vagina, iodine can be found in the urine in an hour. The excretion reaches its maximum in twenty hours and ceases in forty-eight hours. Fever and pregnancy increase the absorption. Hysterectomy makes no difference. Iodoform is absorbed slowly and in very small quantities, but more if fresh than if old. Salicylic acid is absorbed quickly, appearing in the urine in one hour and disappearing in twenty-four hours. Salol is very readily absorbed. Antipyrine is excreted in an hour and a-half and is found for forty-eight hours, but its antipyretic action is feeble as compared with administration by the stomach. In brief, the vagina has undoubted absorptive power, and this is increased in pregnancy, in the puerperal state, and in pyrexia.

SURGERY.

Appendicitis.

Dr. Wyeth (*Medical Record*) says: "Given a surgeon of experience, a clean operator, who, with a minimum of traumatism to the intestines or contiguous viscera can remove a diseased appendix, and it would be better for exploratory laparotomy to be done in every instance within the first twenty-four hours of the disease. On the contrary, were I the subject of an attack, and not sure of my surgeon, I would keep flat on my back, quiet peristalsis and voluntary motion with morphine and take the chances of resolution, encapsulation by adhesion or rupture into the intestine. Good medical treatment gives the patient a better chance than a poor surgeon."

Pyoktannin in Epithelioma of the Ear.

The case described is one of epithelioma of the ear in which injections of pyoktannin caused a disappearance of the neoplasm. The left pinna was very prominent, had a large swelling in front of the ear, and the skin over the mastoid was adherent and discolored. Pyoktannin injections (one in five hundred, one in three hundred, and then one in one hundred) were used. The growth hardened and became more defined after two injections, and the pain was relieved. Death took place sixty-five days after the first injection, and at the post-mortem examination no epithelioma was found in the tissues in front of the ear.—*Dr. Wilkins in Brit. Med. Jour.*

Ruptured Gastric Ulcer Successfully Treated by Abdominal Section and Suture.

T. H. Morse (*Brit. Med. Journ.*) The patient, a young lady aged twenty, having had symptoms of gastric ulcer, was suddenly seized with pain, followed by faintness and vomiting. The pain, which was of a burning character, commenced over the region of the stomach, and gradually extended all over the abdomen. Abdominal section was performed nearly five hours after the commencement of symptoms; the contents of the stomach were found in the peritoneal cavity. The stomach was withdrawn, and a perforation found on the anterior surface close to the cardiac orifice. The organ was washed out and the perforation closed with Lembert's sutures; the stomach was returned, the peritoneal cavity washed out, and the wound united. No food was given by the mouth for sixty hours, and at the end of three weeks the patient was quite well. The author had not up to the present time seen a record of any other successful case of this kind in this country, though cases had been reported by Drs. Penrose and Dickinson, also by Mr. Gilord and Mr. Barling, and by Mr. Warrington Haward, references to which were to be found in the *Brit. Med. Journ.* of the past year.

Mr. Barwell, in the discussion, said that he had been able to find twenty-five cases on record of closing a rupture in the stomach wall, and there were at least four others. In one of the twenty-five cases there was a localized abscess close to the small curvature; this abscess was opened, and that was all that was found to be necessary. He then described Kriege's case. Mr. Barwell suggested the following points, which he thought might point the way to success: First, to operate as soon as possible; secondly, that the incision through the abdominal wall should be to the left of the middle line; thirdly, to search very thoroughly the front wall of the stomach, as in these cases the opening was for various reasons liable to be hidden by lymph, puckering, etc. He suggested that it might be advisable to introduce into the patient's stomach some colored fluid, such as coffee, for this purpose. He could not agree with Mr. Haward that it was necessary to cut away the margin of the ulcer before suturing the stomach. He thought that Mr. Morse had done very wisely in washing out the stomach, and also in eschewing antiseptics in washing out the peritoneum. Mr. Barwell had seen very good results in washing out the peritoneum with warm distilled water in restoring patients from collapse during abdominal operations.

Surgical Treatment of Pulmonary Cavities.

Dandridge maintains that tuberculous cavities in the lower portion of the lung, if single and superficial, should always be opened, provided the patient will allow the operation. Abscess, gangrene and hydatid cysts should be opened and drained when their position can be clearly ascertained. The cavities should be treated by packing with iodoform gauze. It must be ascertained that adhesion of the lung has taken place, and the most perfect surgical technique must be employed.

Aristol in Otorrhea and Burns.

Dr. Krebs, of Hildesheim, has found aristol—which is a di-iodide of thymol occurring as a brownish powder and containing nearly half its weight of iodine, and which has been used for the last three or four years in various skin diseases, ulcers, burns, keratitis and nasal affections—very valuable in aural practice. In thirty-three cases of chronic purulent otitis, aristol alone effected a complete cure in twenty-two. He does not consider it to be an antiseptic, as it does not deodorize a discharge, but he finds that it has a marked effect in drying up and arresting the secretion. In serous discharges of a chronic character persisting after the purulent character has disappeared aristol is preferable to all other drugs, and especially to boracic acid. Often one or two insufflations are sufficient to arrest the serous discharge. It is also of value in chronic otorrhea when uncomplicated and where the perforation is a large one; also in cases where there are granulations of the tympanic cavity and meatus, provided they are not too extensive, and that they are not due to caries of the bone. Aristol should not, however, be used where there is but a small perforation in caries, or where the mastoid antrum is affected, and it is useless in fetid otorrhea, though, if the fetor is due merely to want of cleanliness, the ear should be cleaned, and boracic acid, which is a true antiseptic, blown in. According to Dr. Haas, burns and scalds of all kinds are not satisfactorily treated by means of aristol, which is, chemically speaking, biniodide of thymol. His plan is to disinfect the burnt surface with a boracic lotion and to open the blebs; aristol gauze is then applied, and this is covered with sterilized cooton-wool, gutta-percha paper, and a bandage. He does not recommend the application of aristol in powder direct to the wound at the beginning, as this is calculated to hinder the dressing from soaking up the secretion. Later, however, when this has diminished, the aristol may be applied either in substance or in the form of a ten-per-cent. ointment made up with olive oil, vaseline and lanoline. Dr. Haas collected a large number of references to reports by continental and American surgeons on the use of aristol in burns, a treatment that is by no means very novel, as Dr. Stern, of New York, employed it successfully more than three years ago. He, and most of the writers referred to by Dr. Haas, employed a ten-per-cent. ointment or a solution of aristol in oil from the beginning. The great advantages of aristol are its analgesic action, its antiseptic properties, and its power of hastening cicatrization. Added to these, which to some extent are shared by iodoform, is another great advantage, viz., its entire harmlessness. In this it differs from iodoform, which is unsuitable for application over an extensive surface, for fear of its exerting a toxic action.—*The Lancet.*

The Antiseptic Treatment of Burns.

An eminent French surgeon recently concluded an article with the above heading in the following words:

1. Fresh, superficial burns, as well as deep ones, can heal under antiseptic treatment without the production of pus.
2. If pus is produced, the wound is disinfected, and the course remains the same as if non infected. But if the pus is of long standing and the wound begins to granulate, then disinfection is not possible.
3. To disinfect widespread burns an anesthetic will often be necessary, and to this end chloroform is best suited.
4. If the wound is non-purulent, the unnecessary use of an antiseptic hinders the healing process.
5. Antisepsis is the best analgesic.
6. Burns heal rapidly under the antiseptic treatment. Burns of the second degree require eight days; of the third degree, from two to three weeks.
7. Burns of the second and third degree heal without trace remaining; of the fourth degree, cause a scar, which does not retract, while this will be smoother the less the amount of pus.—*Charlotte Med. Journ.*

Surgical Tuberculosis.

For abscesses, ulcers and joint affections: Open freely, and excise if joint be involved. Remove the caseous material by curetting; sponge the parts well and arrest the bleeding. Fill the cavity, through a thick rubber tube, with salt solution kept at the boiling-point; fill and empty the cavity until it is thoroughly cauterized. Or, fill the cavity with a cold or lukewarm salt solution, and raise the liquid to a boiling-point by introducing into it the blade of a thermo-cautery at red heat. One minute is sufficient to heat the water in a cavity as large as a pigeon's egg. Do not touch the walls of the cavity with the blade of the knife. Give an anesthetic if necessary, though usually cocaine locally will be sufficient.—Jeannel, *Midi Medical.*

Internal Urethrotomy and Forcible Dilatation.

Cantalupo (*Brit. Mer. Jour.*) advocates internal urethrotomy in hard strictures where a dilator cannot be introduced, or, if introduced, cannot be opened (in which case he uses Maisonneuve's urethrotomy). The wound in internal urethrotomy is much less extensive than in forcible dilatation, and the dilatability of the stricture is much greater after urethrotomy than after divulsion. The chief dangers are: (1) Hemorrhage; this may be avoided by using small-bladed instruments—for example, Bottini's. (2) Extravasation of urine; best avoided by retaining a catheter of less calibre than the divided stricture, and using some drainage tube as a siphon. (3) Pyemia may be excluded by antiseptic measures. (4) Fever, generally due to local retention of pus. Cantalupo finds a fresh indication for internal urethrotomy in cases of chronic gleet with stricture, where, after dilating the stricture up to a certain point, it still cannot be dilated up to the calibre of the second part of the urethra.

A Bloodless Operation for Hemorrhoids.

Manley (Boston *Med. and Surg. Jour.*) describes his bloodless method of treating hemorrhoids. A brisk purgative is given the evening before the operation. Before operating, two to four ounces of whiskey are administered, and effective cocainization applied hypodermically. Anal dilatation, gradual and steady; without rupture of the muscle, is done, and, after drying and mopping with cocaine solution, each hemorrhoid is separately seized, close to its base, firmly between the tip of the thumb, index and middle fingers. It is put on full stretch, then twisted, and finally so completely crushed that it is reduced to a pulp, and none of the investing tunics remain, except the mucous membrane and its under stratum of fibrous tissue. The mass is then returned, and an opium suppository introduced. He has treated thirty-five cases in this way with perfectly satisfactory results.

ARMY AND NAVY.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE FIFTEEN DAYS ENDING MARCH 9, 1895.

The leave of absence for seven days granted Captain Paul Clendenin, Assistant Surgeon, is extended twenty-one days.

The Attending Surgeon at Boston, Mass., will attend the sick at Fort Warren, Mass., during the absence of Captain Clendenin.

1st Lieutenant George D. De Shon, Assistant Surgeon, is relieved from duty at Fort Logan, Colorado, and ordered to duty at Fort Douglas, Utah.

Captain Freeman V. Walker, Assistant Surgeon, is granted leave of absence for one month, to take effect upon his relief from duty at Fort Trumbull, Conn.

Leave of absence for six months, on account of sickness is granted 1st Lieutenant Frank T. Meriwether, Assistant Surgeon, U. S. Army.

CHANGES IN THE U. S. ARMY FROM FEBRUARY 16, 1895, TO FEBRUARY 28, 1895.

Carter, H. R., Surgeon: To assume temporary command of Cape Charles Quarantine during absence of P. A. Surgeon: T. B. Perry, February 27, 1895.

Kalloch, P. C., Past Assistant Surgeon. Directed to rejoin station Cincinnati, Ohio, February 21, 1895.

Perry, T. B., Past Assistant Surgeon: To proceed to Brunswick, Georgia, Quarantine, for temporary duty, February 27, 1895.

Houghton, E. R., Past Assistant Surgeon: Granted leave of absence for ten days, February 18, 1895. Leave of absence extended five days February 22, 1895.

Blue Rupert, Assistant Surgeon: To proceed to San Francisco, California, for duty February 23, 1895.

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ORIGINAL ARTICLES.

INJURIES OF THE VERTEBRAL COLUMN AND SPINAL CORD AND THEIR TREATMENT.*

J. C. BIDDLE, M.D., Fountain Spring, Pa.

In the selection of my subject for this paper I do so because I am led to believe that the injuries to the bony structure of the vertebral column and the spinal cord have not received the attention at the hands of the surgeon that their importance demands. The brain, uterus, ovaries and, now that important organ, the appendix, each have received respectful attention, since the introduction of the aseptic or antiseptic treatment of wounds. The inordinate impetus, the brilliant successes achieved in operative surgery during the last few years must place the treatment of injuries of the vertebral column and spinal cord upon an entirely new basis.

The operation of laminectomy for an injury to the vertebral column was first performed by a young surgeon named Henry Kline, at St. Thomas Hospital, London, June 16, 1814, at the suggestion of Sir Astley Cooper. The patient died three days after the operation and the surgeon believed he had hastened the fatal termination by the operation. The operation is still held by many surgeons to do positive injury, because of the difficulties which attend its performance. The operation has been performed, however, many times, and by the most eminent surgeons of Europe and America. They have, however, met with little success.

My experience has taught me that operations on the vertebral column are attended with as good results as those upon the brain or abdomen when you take into consideration the nature of the surroundings. We remove portions of the alimentary canal and large areas of brain substance without any apparent inconvenience or discomfort to the patient. Where is there a record of a case with total destruction of a part of the spinal cord and complete recovery has taken place? It is therefore manifest that the cord, as a whole, is of more importance, and is more intricate than either brain or alimentary canal and we should not expect the same percentage of recoveries, or say that the operation of laminectomy has not its utility in a certain number of cases. It is my opinion that in all cases of dislocation with extreme displacement of the vertebral column, or in fracture dislocations where the cord has been crushed or lacerated, the injury is irreparable. This is to say that the spinal cord is incapable of regaining or of repairing any extensive

* A paper read before the Lehigh Valley Medical Association, at Easton, January 31, 1895. From advance sheets of the "Lehigh Valley Medical Magazine."

lesion. But how can you determine which cases will and which cases will not recover? I am clearly of the opinion that the only way to answer the question immediately is to make an exploratory incision in the cases where paraplegia exists. The vertebral column is so thickly covered by muscles, especially in the lower dorsal and lumbar region, that it is generally impossible to detect the usual symptoms which we find in fractures of the long bones—crepitation and preternatural mobility. Deformity or displacement may exist without making sufficient pressure to produce paralysis because of the large caliber of the vertebral canal. Again we should not attempt to elicit these signs for fear of adding to the existing injury. By making an incision and approaching the parts carefully no harm can occur. Just in the same manner as we would make an irreducible simple fracture of the long bones a compound one and be able to adjust the deformity accurately.

This procedure has several advantages. By the exploratory incision you are certain as to the amount of injury. The spines of the vertebra should be removed near the seat of the injury thereby preventing pressure upon the bed and producing exhausting bed-sores. Again, you give the extravasated blood the opportunity of escaping and, in this way, prevent a possible abscess which would be certain to take the life of the patient. The only objection to this, which would be, by some surgeons, considered a radical and unwarranted procedure, is the shock attending the etherization and operation. Out of fourteen cases operated upon by myself since September, 1890, for fracture or dislocation with total paraplegia, shock has not added to the number of deaths or hastened the otherwise fatal termination. I am firmly convinced that the chances for recovery are diminished in waiting for nature to effect a cure. When there is bone pressure, why not remove it at once? In injuries below the first lumbar vertebra to the cauda equina I would be inclined to wait until after the acute symptoms had passed away, say a week or ten days, and then, if no improvement was manifest, I would operate. Even here why trust too long to the capacity for regeneration when there is great and constant danger of total destruction by the slightest movement of the body? Here, if the nerve be completely separated by the injury and bone or ligaments be interposing they can be removed and the nerve brought together by suture if necessary. We all know that complete division and separation of nerve is no barrier to its recovery but it must have an opportunity to unite and it is plainly our duty to put it in a proper position for nature to establish the reunion.

From my position then I will not sum up or conclude, as has been done in the past by all authors and surgeons, that "the operation of laminectomy for traumatic lesions, as compared with the condition which it is intended to relieve, should be abandoned because *a priori* argument and the results of published cases show that it is unlikely to be of service." I take it that this conclusion is absolutely wrong. It is true that the recoveries recorded by such surgeons as Erichsen, Hutchison, Leyden, Bryant, Macewen, Thorburn, Abbe, and others, are not such as would enthuse or inspire confidence in a conservative and conscientious surgeon. It is a wonder that the operation has not inspired some one who desires to cut and saw for a living or one who was trying to make a record for himself like the fast disappearing ovary fiend and now the appendix surgeon who can smell the cause of an appendicular colic (?).

The diagnosis then in my manner of procedure is not a matter of inference. You will know that the paralysis is due either to bone-pressure, an intra-thecal hemorrhage or perhaps an extensive laceration, crushing or causing a total separation of the cord. If you were convinced beyond a reasonable doubt from the symptoms, that the paralysis was due to a clot you would not be justified in operating. From the cause then you must deduct, in a great measure, your conclusion for surgical interference in cases which are suffering with paraplegia.

The symptoms of dislocation with extreme displacement and those of fracture of the vertebral column with injury to the cord are so manifest that I need scarcely take your time in describing them.

In the time of my service at the hospital 110 cases of severe injuries to the vertebral column have come under my notice and were divided as follows:

Fracture dislocations	12
Fractures	44
Dislocations	23
Partial dislocations	31

On the 12 fracture dislocations, 9 or 75 per cent. died, 2 were improved, and one unimproved. These were treated 966 days.

Of the 44 fractures, 25 or $56\frac{9}{11}$ per cent. died, 10 recovered, 5 were improved, and 4 were unimproved. These were treated 4,580 days.

Of the 23 dislocations, 6 or $26\frac{4}{13}$ per cent. died, 7 recovered, 8 were inproved, and 2 were unimproved. These were treated 3,810 days.

Of the 31 partial dislocations, 1 or $3\frac{3}{11}$ per cent. died, 16 recovered, 12 improved, and 2 were unimproved. These were treated 3,909.

The medical treatment in these cases consists in keeping the patient at complete rest, with the upper portion of the body elevated, especially if the injury be in the cervical or dorsal region. The bowels should only be moved when positively necessary, and then only by enemas; brisk cathartics should seldom be given. A soft catheter should be used about every four hours so as to keep the bladder empty. Great care should be taken so as not to infect the bladder. When cystitis occurs, the bladder should be carefully washed out twice a day with a saturated solution of boracic acid and then again with a solution of ten grains to the ounce, or a one to sixty solution of creolin. Quinine in five-grain doses four times a day until the physiologic effects are complained of; stimulants, tri-nitrin and digitalis with brandy are given until shock disappears; this may last from two to even five days. Morphine and paraldehyde should be administered hypodermatically to allay pain, and after the shock has disappeared, thirty grains of chloralamid, or twenty grains of potassium bromid and five grains of chloral hydrate should be given frequently enough to procure sleep. The patient should be kept perfectly dry and clean and his back dusted with europhen aristol. The patient should not be turned upon his side during the first four or five weeks. He should be raised when necessary by two attendants, one at his shoulders the other at his legs and lift him by pulling in opposite directions; if the patient be very heavy they can be assisted by two in the middle.

Of the fourteen severe cases operated upon since September 8, 1890, ten had the spinal cord completely or partially severed or crushed, and death was inevitable. In the remaining four the cord was compressed. Of these latter four, two have recovered so as to be able to perform manual labor, one following the avocation of that of a huckster, the other a nurse. The remaining two are still under treatment and much improved.

To illustrate our subject let me present to you a brief synopsis of three of the cases coming under my personal treatment.

In case 49* (the first recovery) there was a partial dislocation of the ninth dorsal vertebra. There was complete motor and sensory paralysis of the legs below the knees, but some slight motion and sensation of the muscles of the thighs remained. There was complete paralysis of the bladder and rectum, and extensive bed-sores at the point of fracture and on the sacrum. The patient was very much exhausted from pain, sleeplessness and cystitis, as he had sustained the injury three months before his admission. The urine was purulent and fetid. The patient was prepared for the operation and an incision was made extending from the seventh to the eleventh dorsal spine. The spinous processes of the eighth, ninth, tenth and eleventh vertebræ were removed and the laminæ of the eighth, ninth and tenth. The cord was found to be compressed between the ninth and tenth dorsal vertebræ. The pressure was removed by cutting the bone away. The sharp edge anterior to the cord due to the luxation was cut away and the cord thus freely liberated; the wound was closed in the usual manner and healed kindly. The bed-sores, too, soon disappeared and the patient made a good recovery, being in the hospital one hundred and eight (108) days from the time of the operation.

In case No. 56† the symptoms were about the same with the addition of profound shock, he being admitted a few hours after the injury. Upon making an exploratory incision a short time after his reception, the cord was found to be completely separated between the ninth and tenth dorsal vertebræ. He survived but ten days.

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* See Appendix.
† See Appendix.

In case No. 67†, that of Thomas M., aged nineteen years, admitted May 8, 1891, it was found, after an exploratory incision, that he had sustained a fracture of the eleventh dorsal vertebra by being struck with the sharp corner of the oil-box of a car. The laminæ were found to be driven in making compression upon the cord. The laminæ of the tenth, eleventh and twelfth vertebræ, with the spines of the ninth, tenth, eleventh and twelfth were removed and the symptoms of paralysis, which had existed, soon began to improve and, at the end of 231 days after the operation, he had sufficiently recovered to walk without the aid of crutches and, with the exception of some slight paralysis of the posterior muscles of the thighs, made a good recovery.

And now let me say in conclusion, that here undoubtedly remains an extensive field for thought and experiment. Much has been written upon the subject by both physiologists and surgeons; but of what value are theories, if, after all, we cannot show, by a successful practice, that our theory has been more than a vague suspicion or a mere notion. If anything does inspire confidence in a surgeon for successful work, surely it must be that incentive arising, not out of a mere belief, but rather out of that experience in which belief has been transformed by observation and experiment into positive knowledge. I believe the subject I present to you today to be a most vital one. We all know the delicate and peculiar construction, not to say exclusive nature of the spinal cord, and the delicacy of operations connected therewith; and yet the rapid strides made in surgery during the last ten years teaches us that all knowledge is not yet gained in our science any more than that of other professions. In fact our eyes have been opened to such an extent that we often feel like using the words of the immortal Shakespeare—

"There are more things in heaven and earth, Horatio,
Than are dreamt of in our philosophy."

Undoubtedly right here is opened up a wide field for the inquisitive mind. I do not hesitate in saying that, were it not for the conservative position I previously held in regard to laminectomy, and the adverse conclusions of our best surgeons, out of one hundred and ten (110) cases, with forty-one (41) deaths, that have come before me during the last eleven years, more lives might have been saved.

†See Appendix.

APPENDIXES.

I.

DETAILS OF THE 110 CASES.

Case 1.—J. R., admitted to the hospital, December 10, 1883, fracture dislocation of 11th dorsal, died 2 months after being discharged, in hospital 298 days.

Case 2.—V. K., admitted January 9, 1884, fracture dislocation of 10th dorsal, died 4 months after being discharged, in hospital 118 days.

Case 3.—J. W., admitted January 10, 1884, fracture dislocation of 12th dorsal, died 3 days after admission.

Case 4.—J. W., admitted March 10, 1884, partial dislocation of 10th dorsal, in hospital 202 days.

Case 5.—J. S., admitted May 15, 1884, ancient partial dislocation of 10th dorsal, (3 years ago,) not benefitted, in hospital 31 days.

Case 6.—J. O., admitted June 30, 1884, partial dislocation of either 10th or 11th dorsal, in hospital 100 days.

Case 7.—A. H., admitted July 31, 1884, partial dislocation of 11th dorsal, improved, now a chronic invalid, in hospital 32 days.

Case 8.—E. F., admitted August 2, 1884, fracture dislocation of 10th dorsal, died 31 days after admission.

Case 9.—P. M., admitted September 17, 1884, dislocation of either 7th or 8th dorsal, in hospital 145 days.

Case 10.—P. C., admitted October 20, 1884, partial dislocation of 10th dorsal, in hospital 118 days.

Case 11.—M. O., admitted June 4, 1885, fracture of 11th dorsal, died 202 days after admission.

Case 12.—W. C., admitted October 10, 1885, fracture dislocation of either 10th or 11th dorsal, died 12 days after admission.

Case 13.—J. K., admitted December 5, 1885, fracture of 1st lumbar, in hospital 158 days,

Case 14.—G. B., admitted February 20, 1886, fracture dislocation of 11th dorsal, died in 2 weeks after leaving the hospital, in hospital 368 days.

Case 15.—J. M., admitted March 18, 1886, dislocation of either 11th or 12th dorsal, in the hospital 410 days.

Case 16.—E. A., admitted April 19, 1886, dislocation of either 9th or 10th dorsal, unimproved, in hospital 316 days.

Case 17.—J. N., admitted April 19, 1886, partial dislocation of 7th dorsal, in hospital 37 days.

Case 18.—D. S., admitted July 1, 1886, partial dislocation of 11th dorsal, chronic invalid, in hospital 37 days.

Case 19.—J. E., admitted July 26, 1886, dislocation of either 8th or 9th dorsal, slightly improved, in hospital 232 days.

Case 20.—T. C., admitted September 7, 1886, fracture dislocation of 11th dorsal, died 28 days after admission.

Case 21.—R. F., admitted September 7, 1886, partial dislocation, died about 6 months after leaving the hospital, in hospital 136 days.

Case 22.—J. B., admitted October 1, 1886, partial dislocation of 6th or 7th dorsal, in hospital 317 days.

Case 23.—J. C., admitted November 10, 1886, partial dislocation of either 7th or 8th dorsal, in hospital 145 days.

Case 24.—J. R., admitted November 13, 1886, partial dislocation of 1st lumbar, in hospital 90 days.

Case 25.—J. K., admitted December 14, 1886, partial dislocation of either 2nd or 3rd lumbar, in hospital 127 days.

Case 26.—F. F., admitted March 10, 1887, fracture dislocation of 1st lumbar, in hospital 110 days.

Case 27.—E. T., admitted August 25, 1887, fracture dislocation of 10th dorsal, in hospital 135 days.

Case 28.—A. S., admitted October 13, 1887, partial dislocation of 11th dorsal, died 205 days after admission.

Case 29.—M. B., admitted October 18, 1887, fracture of 11th dorsal, in hospital 140 days.

Case 30.—M. M., admitted February 15, 1888, fracture of 10th dorsal, died 1 day after admission.

Case 31.—M. M., admitted October 8, 1887, partial dislocation of either 6th or 7th dorsal, partial paraplegia remaining, in hospital 317 days.

Case 32.—O. G., admitted February 21, 1878, partial dislocation 10th dorsal, unimproved, removed by his friends in 6 days.

Case 33.—J. P., admitted March 3rd, 1888, fracture of 1st lumbar, died 146 days after admission.

Case 34.—N. S., admitted April 4th, 1888, fracture of 1st lumbar, died 71 days after admission.

Case 35.—J. M., admitted May 18, 1888, partial dislocation of 10th dorsal, in hospital 18 days.

Case 36.—P. F., admitted June 26, 1888, fracture of either 9th or 10th dorsal, died 11 days after admission.

Case 37.—A. F., admitted June 26, 1888, fracture of 3rd dorsal, died on day of admission.

Case 38.—A. E., admitted August 1, 1888, fracture of 1st lumbar, died 71 days after admission.

Case 39.—F. S., admitted August 5, 1888, fracture of 10th or 11th dorsal, died 24 days after admission.

Case 40.—J. M., admitted August 23, 1888, partial dislocation of 2nd lumbar, in hospital 76 days.

Case 41.—J. S., admitted October 16, 1888, fracture of 10th dorsal, died 3 days after admission.

Case 42.—F. D., admitted October 27, 1888, fracture of 1st lumbar, died 10 days after admission.

Case 43.—J. M., admitted January 20, 1889, fracture of 3rd cervical, died 1 day after admission.

Case 44.—J. M., admitted March 14, 1889, partial dislocation of 7th dorsal, improved, in hospital 35 days.

Case 45.—J. A., admitted March 21, 1889, fracture of 10th dorsal, died on day of admission.

Case 46.—P. G., admitted March 29, 1889, fracture dislocation of either 11th or 12th dorsal, died 2 days after admission.

Case 47.—T. K., admitted May 12, 1889, fracture of 10th dorsal, died 120 days after admission.

Case 48.—J. G., admitted May 12, 1889, dislocation of either 2nd or 3rd lumbar, in hospital 298 days.

Case 49.—E. E., admitted June 17, 1889, partial dislocation of 9th dorsal, in hospital 189 days.

Case 50.—N. P., admitted July 2, 1889, fracture of either 4th or 5th lumbar, in hospital 138 days.

Case 51.—G. W., admitted August 2, 1889, fracture of 11th dorsal, died 38 days after admission.

Case 52.—T. J. admitted November 25, 1889, partial dislocation of 1st lumbar, in hospital 84 days.

Case 53.—R. J., admitted November 28, 1889, dislocation of either 8th or 9th dorsal, in hospital 138 days.

Case 54.—S. K., admitted December 5, 1889, fracture of 1st or 2nd lumbar, in hospital 147 days.

Case 55.—F. S., admitted December 20, 1889, fracture of 9th dorsal, died 16 days after admission.

Case 56.—B. H., admitted January 31, 1890, fracture of 9th dorsal, died 10 days after admission.

Case 57.—J. B., admitted April 25, 1890, fracture of 9th dorsal, died on day of admission.

Case 58.—A. M., admitted May 10, 1890, dislocation of 11th dorsal, improved, in hospital 225 days.

Case 59.—F. M., admitted June 14, 1890, fracture of 10th dorsal, improved, in hospital 301 days.

Case 60.—S. W., admitted July 21, 1890, partial dislocation of 11th and 12th dorsal, in hospital 31 days.

Case 61.—A. A., admitted March 6, 1891, fracture of 3rd and 4th lumbar, died on day of admission.

Case 62.—J. M., admitted March 10, 1891, fracture dislocation of 2nd lumbar, died in 592 days after admission.

Case 63.—M. G., admitted March 19, 1891, partial dislocation of 11th and 12th dorsal, improved, in hospital 109 days.

Case 64.—W. H., admitted March 28, 1891, fracture of 3rd and 4th dorsal, unimproved, in hospital 85 days.

Case 65.—W. L., admitted April 13, 1891, fracture dislocation of 11th dorsal, died 111 days after admission.

Case 66.—P. D., admitted April 29, 1891, fracture of 9th dorsal, died 10 days after admission.

Case 67.—T. M., admitted May 8, 1891, fracture of 11th dorsal, total paraplegia except slight motion and sensation of posterior muscles of thighs, in hospital 231 days.

Case 68.—A. B., admitted June 28, 1891, partial dislocation of either 2nd or 3rd lumbar, slight paralysis, in hospital 83 days.

Case 69.—M. B., admitted June 28, 1891, fracture of 8th dorsal, slight paralysis remaining, in hospital 47 days.

Case 70.—J. C., admitted June 29, 1891, comminuted fracture dislocation of 1st lumbar, cord almost separated, died 35 days after admission.

Case 71.—A. G., admitted August 5, 1891, partial dislocation of 11th dorsal, improved, in hospital 95 days.

Case 72.—J. B., admitted August 11, 1891, fracture of 10th and 11th dorsal, died on day of admission.

Case 73.—M. H., admitted November 19, 1891, partial dislocation of 2nd lumbar, in hospital 322 days, improved.

Case 74.—C. K., admitted November 30, 1891, dislocation of 12th dorsal, died 565 days after admission.

Case 75.—J. M., admitted December 3, 1891, dislocation of 11th dorsal, died 87 days after admission.

Case 76.—J. G., admitted April 21, 1890, partial dislocation of 5th dorsal, in hospital 24 days.

Case 77.—A. C., admitted May 8, 1890, fracture of 10th dorsal, died 4 days after admission.

Case 78.—J. A.. admitted June 30, 1890, partial dislocation of either 2nd or 3rd lumbar, in hospital 11 days.

Case 79.—S. S., admitted March 3, 1892, partial dislocation of 12th dorsal, improved, in hospital 92 days.

Case 80.—A. A., admitted April 7, 1892, dislocation of 10th dorsal, died 3 days after admission.

Case 81.—J. L., admitted May 6, 1892, partial dislocation of either 1st, 2nd, or 3rd lumbar, improved, in hospital 23 days.

Case 82.—J. C., admitted June 20th 1892, partial dislocation of either 4th or 5th dorsal ancient, improved, in hospital 26 days.

Case 83.—C. B., admitted June 22, 1892, fracture of 8th dorsal, died 4 days after admission.

Case 84.—J. L., admitted August 10, 1892, dislocation of 10th, 11th, and 12th dorsal, died 24 days after admission.

Case 85.—J. S., admitted October 18, 1892, dislocation of 10th and 11th lumbar, in hospital 180 days.

Case 86.—B. S., admitted October 27, 1892, fracture of 12th dorsal, improving, remaining in hospital.

Case 87.—F. W., admitted November 7, 1892, fracture dislocation of 10th dorsal, died 5 days after admission.

Case 88.—W. R., admitted December 12, 1892, dislocation of 10th dorsal, improved, in hospital 320 days.

Case 89.—G. R., admitted February 8, 1893, fracture of 9th dorsal, died 77 days after admission.

Case 90.—J. B., admitted April 1, 1893, dislocation of 9th, 10th, and 11th dorsal, improved, in hospital 65 days.

Case 91.—C A., admitted April 18, 1893, dislocation of last dorsal and 1st and 2nd lumbar, improved, in hospital 421 days.

Case 92.—J. M., admitted August 12, 1893, fracture dislocation of 10th dorsal, died 19 days after admission.

Case 93.—J. Z., admitted August 13, 1893, partial dislocation of 9th dorsal, cord was compressed, in hospital 19 days.

Case 94.—J. C., admitted October 9, 1893, fracture of 12th dorsal, improved; in hospital 61 days.

Case 95.—A. G., admitted October 12, 1893, fracture of 1st lumbar, improved, in hospital 235 days.

Case 96.—J. H., admitted October 29, 1893, dislocation of 3rd lumbar, improved, remaining in hospital.

Case 97. —J. B., admitted November 13, 1893, partial dislocation of 9th dorsal, in hospital 93 days.

Case 98.—A. M., admitted November 23, 1893, fracture dislocation of 1st lumbar, died 33 days after admission.

Case 99.—G. Z., admitted January 12, 1894, fracture of 12th dorsal, in hospital 314 days.

Case 100.—J. F., admitted March 1, 1894, fracture dislocation of 2nd lumbar, remaining in hospital, able to walk with crutches, improving.

Case 101.—J. B., admitted April 11, 1894, fracture of 3rd lumbar, in hospital 119 days.

Case 102.—C. S., admitted June 12, 1894, partial dislocation of 4th dorsal, in hospital 6 days, removed to his home.

Case 103.—P. G., admitted June 27, 1894, partial fracture of 12th dorsal, in hospital 42 days.

Case 104.—H. A., admitted June 30th, 1894, fracture of the arches of the 11th and 12th dorsal, and the spinous processes of the 1st and 2nd lumbar, total paralysis below the knees, remaining in the hospital.

Case 105.—J. F., admitted September 21, 1894, fracture of 9th dorsal, died on day of admission.

Case 106.—E. B., admitted October 5, 1894, partial dislocation of 10th dorsal, remaining in hospital.

Case 107.—D. L., admitted October 26, 1894, partial dislocation of 5th dorsal, remaining in hospital.

Case 108.—J. C., admitted November 22, 1894, fracture dislocation of 10th dorsal, died 7 days after admission.

Case 109.—J. C., admitted December 12th, 1894, partial dislocation of 5th dorsal, remaining in hospital.

Case 110.—A. N., admitted January 8, 1895, fracture dislocation of 11th dorsal, died on day of admission.

II.

SYNOPSIS OF CASES OPERATED UPON.

Symptoms Before the Operation.	Nature of the Operation and Extent of the Injury to the Cord and Vertebral Column, and Results.
No. 1. Operated on Sept. 8, 1890. Thomas K., aged 35, a miner by occupation, injured Jan. 25, 1890. Had a fracture of the left thigh and a fracture of the 5th, 6th, 7th, 8th, 9th and 10th ribs. I saw the patient in consultation a few hours after the accident. Was in profound shock. Face dejected and showing extreme anxiety. He came to the hospital 3 months after the injury was received. Thigh and ribs united. There was complete paraplegia from just below the umbilicus in front and from the nates behind. There were extensive bed-sores both in the lumbar region and at the point of injury. He had cystitis and orchitis. Very much emaciated. Respiration frequent and shallow. He had some hypostatic pneumonia.	An incision was made extending from the 8th to the 12th dorsal. Very little hemorrhage. Ether was used as an anesthetic. The spines of 9th, 10th, 11th and 12th, with the arches of the 10th and 11th were cut away. A fracture was found with extreme displacement of the vertebral column. The cord was completely severed. Its cut ends being two and one-half inches apart. Wound healed. Died 3 weeks after the operation.
No. 2. Operated on Sept. 8, 1890. Evan E., aged 21, mine laborer by occupation. Complete motor and sensory paralysis below the knees. Some slight motion and sensation of the thighs. Paralysis of the spincters. Bed-sores, cystitis, urine purulent and fetid. Injured 3 months before his admission.	An incision was made extending from the 7th to the 11th dorsal spine. The spinous process of the 8th, 9th, 10th and 11th, and the laminæ of 8th, 9th and 10th were removed. Cord was compressed. Wound healed kindly and the patient improved rapidly. Torsion and hot water were used to arrest the hemorrhage. Recovery.
No. 3. Operated on Dec. 20, 1890. Frank S., aged 20, railroad brakeman by occupation. Complete paraplegia, severe shock, feeble, rapid respiration, high temperature.	Spines of 8th, 9th, 10th and 11th with the laminæ of the 9th and 10th were removed. Fracture of the 9th dorsal. Cord completely separated. Died 16 days after his admission.
No. 4. Operated on Jan. 31, 1891. Benjamin I. H., aged 33, miner by occupation. Paraplegia absolute as high as the umbilicus, shock severe, excruciating pain at the point of injury, high temperature, rapid, feeble pulse.	Operation same as in former cases. Comminuted fracture. Cord and membranes completely separated. Pain relieved, I think because the peripheral nerves from above the fracture were liberated. Died 10 days after his admission.
No. 5. Operated on Mar. 10, 1891. Joseph M., aged 46, miner by occupation. Compound fracture of frontal bone. Paraplegia, cystitis, incontinence of urine and feces, limbs wasted, improved for a time, so that he could stand with some assistance, chills and fever with spasms of the limbs and emaciation followed.	Operation performed 592 days after his admission. The cauda equina was found to be atrophied and soft. Hard inflammatory tissue filled the vertebral canal. Death on the day of the operation, which was partly expected.
No. 6. Operated on May 8, 1891. Thomas M., aged 19, laborer by occupation. Paraplegia; severe pain at 11th dorsal. The spine of the 11th dorsal indented, severe pain and spasms in posterior muscles of the thigh,	The spinous processes of the 9th, 10th, 11th and 12, and the laminæ of the 10th, 11th, and 12th were cut away; they were driven down, making compression upon the cord, especially the 11th. Pain and spasms soon subsided.

cystitis, constipation, had to use the catheter to relieve his bladder.	Sensation and motion gradually returning. Recovery except slight paralysis of posterior muscles of the thighs, with some ankle clonus. Cannot retain his urine long.	No. 12. Operated on Jan., 1894. Brom S., aged 24, mine laborer by occupation. Total paralysis of left leg and part of thigh. Right leg or thigh not so bad. Extreme ankle clonus, lacerated wounds of scalp, incontinence of urine and feces, cystitis. Priapism at times lasting from 6 to 12 hours. Has had violent attacks of orchitis. The extensor muscles are slightly improving.	Operated, 3 months after his admission, because of beginning gangrene of his toes on the left foot. This side being worse, it was evident that the pressure was on some of the nerves in the sacrum. It was found that there was compression on two of the nerves as they emerged from the sacrum. The compression was relieved. The gangrene soon disappeared. His limbs are atrophied, though he can move his legs. Under treatment for 819 days. He is able to walk with crutches.
No. 7. Operated on June 29, 1891. James C., aged 18, driver in the mines by occupation. Absolute motor and sensory paralysis from just below the anterior, superior spinous process in front and gluteal notch behind. Excruciating pain in the lumbar region extending into genitalia, slow, feeble pulse, labored respiration, shock continued for 5 days.	Operation the same as preceding cases. Membranes lacerated and cord almost separated. Operation performed 2 weeks after the injury. Pus had formed and was burrowing beneath the muscles and had entered the vertebral canal. Death in 35 days.		
No. 8. Operated on Nov. 30, 1891. Charles K., aged 37, miner by occupation. Paraplegia, symptoms similar to former case.	Lateral dislocation of 12th dorsal, cord crushed so that nothing but the membranes could be felt for nearly an inch. Tension taken off of the cord by cutting away the sides of the arches. Wound healed. Died in 565 days from exhaustion.	No. 13. Operated on March 22, 1893. George R., aged 23, miner by occupation. Total paralysis of lower part of trunk and limbs. Involuntary defecation and micturition. Severe pain, 8th dorsal spine very prominent, difficulty in breathing, severe shock, death imminent, operation delayed, gangrene in lumbar and sacral region, abscess in scrotum.	Some improvement in bed-sore, abscess healed, operation 6 weeks after reception of injury. 9th dorsal vertebra was fractured and driven in tightly compressing the cord. Wound healed and some improvement followed. Patient was taken to his home 5 weeks after the operation.
No. 9. Operated on May 8, 1892. Andrew C., aged 32, railroad laborer by occupation. Gun-shot wound of neck. High temperature. Respiration slow and labored. Delirium. Cyanosis of the face, neck and extending down over his chest.	Fracture of 5th or 6th cervical; cord and membranes lacerated. Inflammation of membranes and cord. The spines of the 5th and 6th, and a part of the arches were cut away, as little bone was removed as possible. Post mortem showed hemorrhages into brain and inflammation of the membranes. Died in 4 days.	No. 14. Operated on August 18, 1894. George Z., aged 26, a miner by occupation. On the day of his admission, January 12, 1894, the lower portion of his body and limbs were completely paralyzed. Fracture of forearm, compound fracture of second metacarpal, compound complicated fracture of last phalanx of index finger, with extensive lacerations of hand and face, and contusions of back. He was suffering from severe shock, and it seemed as though death would soon intervene. Pulse weak and rapid. Temperature from 100 to 104. In 4 days he began to rally and the case looked more hopeful. A large bed-sore soon appeared with extensive sloughing. No improvement seemed to follow for some 7 or 8 months. Then the bed-sore commenced to heal, but was soon followed by local gangrene of the skin of his feet and legs, cystitis and orchitis with abscess of left testicle.	The operation revealed the fact that the 11th and 12th dorsal vertebræ were fractured and that the cord and membranes were completely separated for about 2 inches. The ends of the cord were degenerated. His limbs were atrophied, abscess opened in the knee-joint with extensive gangrene of the skin. He was taken to his home and died in about 2 weeks. He was in the hospital 314 days.
No. 10. Operated on April 7, 1893. Andrew A., aged 25. Total paraplegia, lacerated wounds of hands, arm, head and leg. Shock, pupils dilated, rapid pulse.	Operated immediately, comminuted fracture of 10th dorsal, membranes punctured and cord lacerated. Died 3 days after his admission.		
No. 11. Operated on June 22, 1893. Carmin B., aged 47, mine laborer by occupation. Complete paraplegia from pelvis down. Labored breathing, pupils dilated, patient cyanotic, urine suppressed.	Operated at once. Fracture of the 3rd or 4th cervical vertebra, membranes and cord almost severed, considerable fluid escaped as soon as the skin was cut through. It was almost a compound fracture. Symptoms continued until death. Only a few ounces of urine were secreted in 4 days. Died in 4 days.		

COMMUNICATIONS.

ACETANILID VERSUS QUININE TO ABORT CHILLS AND FEVER; AND ACETANILID AS A DUSTING POWDER.*

BENJAMIN H. BRODNAX, M.D., BRODNAX, LA.

In 1890, I first used acetanilid in a case of catarrhal fever with convulsions, in an infant nine months old, with astonishing amelioration of all grave symptoms in fifteen minutes. My next trial of the drug was in intermittent fever in a family of three small children. The doses ranged from two to three grains, and when the time for the chills arrived the children were asleep and perspiring. I have employed the drug quite extensively, but it is especially in chills and fever that I desire to emphasize its great merit. My mode of using it is as follows:

If there is time before the chill I give from one and a half to two grains of calomel in quarter-grain doses a half hour apart. Then, whether the bowels have acted or not, I give, according to the age, from two to six grains of acetanilid twenty minutes or half an hour before the expected chill. Gentle perspiration, with sweet and natural sleep, usually promptly follow the administration of the drug, from which the patient wakens entirely relieved and ready to go about in half an hour.

When there is not time before the chill to administer the calomel it may be deferred until afterward; but the acetanilid may be given immediately before or during any stage of the chill or fever, with the happy result of promptly inducing sleep and gentle perspiration. Should the desired effect of the drug—viz., sleep and perspiration—not follow its administration within a half hour, a second dose of equal amount should be given.

The after-treatment consists of an acid tonic, viz.:

> Acidi. nitro. muriatici dil...f℥j
> Ferri sulphatis.....gr. lxxx.—M.
> This should stand for twenty four hours. S. Ten drops in water three or four times a day.

On Friday, October 19th, I was called to see a young man who had had "dumb" chills, with vomiting and severe gastric disturbances, for six days, the attack coming on daily at one o'clock and lasting until midnight. When I arrived, at seven o'clock in the evening, he was vomiting thick, glairy mucus, and was unable to retain anything on his stomach. I immediately administered hypodermatically one-quarter of a grain of morphine and gave six grains of acetanilid dry upon the tongue. He had one slight attack of vomiting soon after, but a little later fell into a sweet and a refreshing sleep, from which he did not waken until seven o'clock the next morning. As the next chill was expected at one o'clock he was ordered to take six grains of acetanilid twenty minutes before. No chill followed, and none have taken place since. The after-treatment with the "acid tonic" was pursued, as is always my custom.

I have now treated several hundred cases of chills with acetanilid, and without quinine, and report my success in the hope that others will be induced to give it a trial.

Acetanilid and boric acid, in equal parts, as a dusting powder, I have used extensively in ulcers, burns, etc. I find the powder especially serviceable in the excoriation of infants and fleshy people; with it I dust the funis of the newborn babe, while over the vulva of the mother I place a little cotton previously well dusted with the powder. Made into a paste with glycerin, I have used it in a vaginal tampon to allay uterine pain.

In the case of a female, sixty-one years of age, almost crazed with the itching from a pustular eruption that covered the lower part of the abdomen, vulva, and anus, the powder well dusted over the affected parts, after first moistening the parts with dilute carbolic acid, was followed by six hours of consecutive sleep. She was wakened by a return of the itching, and, rising, washed the parts and re-

* Read before the Philadelphia County Medical Society, February 13, 1895, by Dr. Oscar H. Allis.

applied the dilute carbolic acid and powder, with immediate return to sleep. A great improvement was observed the next day, and in a few days the parts were well. Previous to the application of the powder she had not slept well for several nights even with the aid of morphine.

Internally I have used it to correct a foul breath; also in dysentery and diarrhœa. When taken on the tongue and held in the mouth a few moments before swallowing, it has the effect of allaying the distressing thirst that accompanies fever.

AN INTERESTING CASE OF RAPID SPEECH DEVELOPMENT IN ADULT, FOLLOWING OPERATION FOR TONGUE-TIE.*

G. HUDSON MAKUEN, M.D., PHILADELPHIA.

The patient whom I shall show you this evening is nineteen years of age, a farmer by occupation, and up to within eleven months he has been utterly unable to use articulate speech in a manner which could be understood. He had been examined by local physicians and had been made to believe that his trouble was of central or cerebral origin, and that nothing could be done for him. The feeling that he was thus cut off from this chief means of communication with his fellows had completely disheartened him.

He had attended public school with other boys, and with the aid of his friends at home had managed to make some progress in arithmetic and to acquire a very slight theoretical knowledge of our language. He seemed to understand a little ordinary conversation, and learned easy lessons in history and geography by having them read to him. He would attempt to talk and recite in school, but his teachers had to guess, for the most part, at the meaning of his jargon. For myself I do not recall a single word that was at all intelligible. The first time he came to my office he could not make the conductor on the train understand the name of the station at which he lived, and after frequent attempts he was obliged to write it out, which he could do very imperfectly, for his spelling was almost as bad as his speech.

With a history of this kind, and being deprived of that greatest of all means of mental development—speech—you will be prepared to believe that he had acquired a reputation, even among those who knew him best, for listlessness and stupidity. Indeed, his aunt, with whom he came, had given up all hope of making anything of him; but the boy, discouraged as he was, seemed determined to make one more effort, and he was thoroughly in earnest.

Upon examination of his vocal and speech organs I found only a slight post-nasal catarrh and some little hypertrophy of the faucial tonsils. Of course, I thought immediately of the probability of his being tongue-tied, but his aunt assured me that there was nothing of the sort. I found, however, that he could protrude the tip of the tongue scarcely beyond the outer margin of the lips. The tip seemed a full inch or more too short, and, strange to say, the frænum did not appear to be a very decided factor in holding it down or back, for in his attempts to protrude the tongue the frænum was not greatly stretched. The trouble seemed to be a muscular one, and this I believe to be the case. The anterior fibres of the geniohyoglossus muscle were too short, and prevented not only the protrusion of the tongue, but any other free action of that member. He could elevate the back part of the tongue and make the hard G sound or the NG sound, but he could make no sound whatever which required the placing of the tip of the tongue to the roof of the mouth or the upper teeth. He made the K sound for T and hard G sound for D. As an example, he said "ik" for "it," and when I asked about his parents he said they were "gay"—meaning that they were dead. Furthermore, there seemed to be no method in his speech; it

*Read before the Philadelphia County Medical Society, February 18, 1895.

was a mere jumbling of inarticulate and unintelligible sounds, and the expression of his face was in perfect harmony with his speech—vacant, staring, meaningless.

The boy being somewhat delicate, and his friends being decidedly opposed to operative measures, and the cause of the trouble being doubtful, I decided to study the case carefully before giving an opinion or recommending methods of treatment. I gave him some vocal exercises for a few days and watched the results, after which I clipped the frænum of the tongue well back.

I then put him in the hands of a teacher, who gave him, under my direction, several hours' vocal drill each day for several months, during which time he made considerable improvement in sounds and words which did not require free action of the tip of the tongue. By this time I was convinced that the trouble was entirely a local one, and that the boy was of more than average intelligence and well worth developing. I then decided to divide the anterior fibres of the geniohyoglossus muscle, and thus try to give to the tongue the necessary freedom of action. His people would not give their consent to etherization, for they were skeptical as to favorable results from any measures whatever. The boy, however, was desperate, and would submit to anything which promised relief. We took the matter into our own hands, therefore, and with cocaine anesthesia I made an incision under the tongue of three-quarters of an inch in the anteroposterior direction and one and one-half inches from side to side. There was considerable bleeding, which was easily controlled, and, of course, there was also some pain.

He came to my office each morning for five days thereafter, and I broke up little adhesions which had formed and practiced slight lingual traction. On the morning of the sixth day he came in a great state of excitement, and with much pain, which he referred to the region of his tongue and throat. The tongue was greatly swollen, filling the entire mouth and protruding between the lips. He had a temperature of 103°. The larynx became involved to the extent of threatening suffocation, and I thought it would surely be necessary to open the trachea, which I made all preparations to do, but after succeeding in giving him a brisk purge the inflammation gradually subsided and the breathing became less labored. He was confined to bed for ten days, after which time he practiced frequent lingual traction and vocal exercises directed toward a free action of the tongue. His improvement from this time on has been most wonderful. Here we have a young man, nineteen years of age, who less than a year ago could not pronounce intelligibly more than three words of our language, could not buy a morning paper or tell you where he lived, and could not give his name to save his life. What he can do to day, with your permission, Mr. President, I shall try to demonstrate to you. I shall ask him to recite in your hearing Brutus' speech against Cæsar.

A New Antipyretic.

Tussol is the name given to a compound of amygdalic acid and antipyrine. Dr. Rehn of Frankfort-on-the-Main, has used the drug recently in quite a number of cases of whooping cough in children. He has found it useful in reducing the frequency of the paroxysms and mitigating their intensity, that its action is different from that of simple antipyrine, and that no untoward effects have been observed from its use. It is soluble in water, and as a corrigent raspberry syrup is better than milk. The minimum doses for children are as follows: Under one year of age, from three-quarters of a grain to a grain and a half, two or three times a day; from one to two years, a grain and a half three times a day; from two to four years, from three grains and three-quarters to six grains, three or four times a day; for older children, seven grains and a half, four times a day or more.

The Inheritance of Insanity.

Dr. G. Fielding Blandford, President of the Physiological Section of the British Medical Association, took as the subject of his opening address, "The Prevention of Insanity." One of the most important factors in the etiology of the disease, he said, is heredity. Sir Benjamin Ward Richardson has made the assertion that insanity is transmitted through the male line, but the speaker held that the reverse is the case, the taint passing through the female line rather than the male. He did not, however, insist so strongly on this point, holding that the safest rule was that no one, man or woman, who had had an attack of insanity should marry.

VARICELLA COMPLICATED WITH GANGRENE OF THE SCROTUM.*

CHARLES D. SPIVAK, M.D., PHILADELPHIA.

Jonathan Hutchinson was the first to draw the attention of the medical profession to a complication of varicella characterized by the development of gangrene of the skin and deeper tissues at the site of the eruption. Since his memorable article on "Gangrenous Eruption in Connection with Vaccination and Chickenpox" (*Med. Chir. Trans.* vol. lxv., p. 1), similar cases have been reported from England by Abercrombie (*Trans. Path. Soc. Lond.*, vol. xxxi., p. 333), Martin (*Brit. Med. Journ.*, 1881, vol. ii., p. 803), Howard (*Ibid.*, 1883, vol. i., p. 904), Jamieson (*Trans. Med. Soc. Edin.*, 1886-87, vol. vi.), Andrew (*Clinical Record*, 1890, vol. i., p. 63, and *Trans. Clin. Soc. Lond.*, vol. xxii., p. 79), Blowly (*Lancet*, London, 1885, vol. i., p. 987), Payne (*Trans. Path. Soc. Lond.*, vol xxxvi., p. 471), Crocker (*Med. Chir. Trans.*, vol. lxx., p. 397), and Stanifooth (*Med. Press and Circular*, London, 1890, vol. xlix., p. 37). The United States and Germany are represented in the literature on the subject by two authors each: the first by Woodward (*Pacific Med. and Surg. Journ.*, 1889, vol. xxxii., p. 197) and A. F. Büchler (*Amer. Journ. Med. Sci.*, 1889, vol. xcviii., p. 265, and the latter by Demme (*Wiener Med. Blätter*, 1892, vol. xv., p. 3) and Cassel (*Archive für Kinderkrankheiten*, 1894, vol. xvii., p. 371). Whether the children of other nationalities are exempt from this complication, or the cases have not been reported, I do not undertake to decide. So far as my researches go I could not find a single case in the French, Italian, Russian, or Spanish medical literature. The rarity of the complication in general, and the exceptional features of the case which came under my treatment in particular, justify me in reporting the same before you.

The patient was a boy of Russian parentage, aged two years, whose father and mother are healthy, with no scrofula or tuberculosis in family, and with five other children all well and healthy. Had had no serious illness previous to the attack of chickenpox. As I saw the case for the first time only on the eighth day of the disease I have to rely upon the data furnished by the parents, who proved to be tolerably good observers and quite reliable. On November 25, 1894, the appearance of the chickenpox was noticed for the first time; on the 26th the child became restless and had fever; on the 27th the fever increased, the child was delirious, and the scrotum became red and swollen. This state continued until the 30th, when the swelling extended to left inguinal region; a black spot, the size of a pin-head had appeared on the left side of the scrotum, and soon several others formed a circle around the original one and coalesced. On the following day another black spot appeared, a little further to the left on the scrotum, and "before one had time to look at it," as the parents expressed themselves, the process of deep ulceration and "eating up" commenced. On December 3d I saw the child for the first time. The child was well preserved and plump, as seen on the photograph and by its appearance now, and somewhat irritable. The penis, the scrotum, and the left inguinal region were very much swollen and tender. The left side of the scrotum was covered by blackish, muddy-looking crusts, and detritus covering about two-thirds of it and passing over the raphe to the right side. The smell was very offensive. The crusts and detritus were carefully removed and the tunica albuginea of the left testicle was exposed to the view, thus showing that the gangrenous process destroyed not alone the integument but also the dartos, the external cremasteric, and internal fascias, and the tunica vaginalis. There was a distinct areola around the ulcer. The existence of pus in the inguinal region was easily demonstrated by its fluctuation and also by the oozing from a very small spontaneous opening found about half an inch from the scrotum. The temperature was 101.6°, pulse 110. Pressure over the bubo gave pain, but the handling of the ulcer was almost painless. I washed the

* Read before the Philadelphia County Medical Society February 13, 1895.

parts with bichloride and applied the iodoform-gauze dressing and bandage. On the following day, when the bandage was removed, the ulcer was found to present a somewhat better appearance, but was still angry looking and covered with pus from the oozing aperture. The child was anesthetized by Dr. Rachel Skidelsky, and introducing the groove director through the opening I laid open the ingunial region throughout its length, as is seen on the photograph. I cleansed the wound thoroughly and packed it with iodoform-gauze. (At this juncture the photograph was taken, which shows the incision with the packing in it; the left testicle exposed and many spots of dried up vesicles all over the body.) The ulcer was dressed with bichloride gauze saturated in hydrogen dioxide, and applied a T-bandage. Of course the ulcer required a good deal of trimming of the dead tissues. I ordered two grains of quinine to be given in the evening and two grains in the morning. It was then that I noticed that three children in the family had varicella in different stages of development. There were no complications in the other cases.

On the following day the temperature fell to 99.2°; the child slept almost the whole night, the first time since it was taken sick; the ulcer and wound were clean and the gangrenous process checked. The local treatment was continued the same during the entire period of the regeneration of the scrotum, which took about thirty-five days. The repair is complete and admirable, as you can see on the child, leaving only a star shaped cicatrix. No internal treatment was needed after the third day.

Through the kindness of Dr. J. S. Billings, Deputy Surgeon-General U. S. Army, I was enabled to trace the literature on the subject antedating the report of Hutchinson. Besides the mention by Hutchinson of two casts in Guy's Hospital Museum, which were named varicella eschorotica, and the case of Stokes described in 1807 in his *Dublin and Physical Essays on Eruptive Diseases in Children*, which he named pemphigus gangrenosa, and which, according to Hutchinson are to be regarded as cases of varicella gangrenosa, the following cases were reported and minutely described by their respective authors as varicella complicated with gangrene. Dr. Humphrey Storer (*Boston Med. and Surg. Reporter*, 1828, vol. i., p. 212), Steinthal (*Analekten.*, 1843), Laewenhardt (*Rheinische Monat. für Prakt. Aerzt.*, 1850), Dr. Frederick J. Brown, of Rochester (*Brit. Med. Journ.*, 1863, vol., ii., p. 420), and Dela Harpe (*Bull. Soc. Med. de la Suiss Rom.*, 1869).

Treatment of Epilepsy.

According to the *American Medico-Surgical Bulletin*, Eulenburg recommends a combination of one part of ammonium bromide to two parts each of potassium and sodium bromides, to be given in a weak watery solution; the dose to be regulated by the number, character, intensity, duration and time of occurrence of the fits; also, the conditions presented in the interim, the average daily dose for an adult being from one to two drachms, but four to five drahms may be safely given if the patient be carefully watched, and to avoid stomach trouble it is preferable to administer the dose about half an hour after meals.

Intolerance may be overcome by beginning with small doses of bromide combined with arsenic and iron.

When a daily dose of the bromides sufficient to control the paroxysms has been determined, it should be rigidly adhered to throughout the treatment, and the bromides are, under all conditions, to be continued for three years after the last fit.

For Ringworm.

Iodine has been found to be one of the most effective agents for destroying the parasite upon which this disease depends. An excellent method of applying it is the following: Thoroughly cleanse the scalp with soap and water. Dry perfectly, then apply a solution of one part of pure iodine in thirty parts of flexible collodion. Renew the application each day for four days. At the end of fifteen days renew the collodion, wash the scalp first with soap and water, then, after thoroughly removing the soap, wash with a hot solution of bichloride of mercury, one twenty-five-hundredth. After allowing the bichloride solution to remain in contact with the scalp for half an hour, wash with pure water, dry, and apply vaseline or zinc ointment. If necessary, repeat the application.—*Mod. Med.*

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

ELECTRICITY IN UTERINE FIBROMAS.

Dr. Mally (*Annales de Gynecologie*, No. 10, 1894) reports on thirty-three cases of fibroma of the uterus which he has treated by electricity. In seven the symptoms wholly disappeared (menorrhagia); the results were less favorable in cases where the appendages had been injured during laparatomy; in one patient, who left off treatment, there was a salpingitis; in four cases he noticed an actual diminution of the size of the growth; in four there was no decrease in size, and in one a real increase. He describes two procedures for the application of electricity: a surgical and a medical application. The surgical, characterized by deep cauterization, he holds indicated in—

1. Fibromas that are increasing in size.
2. Fibromas with simultaneous disease of the appendages.
3. Fibromas that project into the cavity of the uterus and which will probably be easily enucleated.

Otherwise the usual measures (medical) are to be employed, with introduction of the positive and negative poles, with their well-known action.

GALVANIC IGNIPUNCTURE IN LUPUS TELANGIECTODES.

Dr. D. Majocchi (*Berliner Klinische Wochenschrift* No. 20, 1894) in a case of lupus teleangiectodes disseminatus of the lower extremities which was characterized by a great overdevelopment of the capillary vessels in the region of flat and slightly infiltrated plaques employed galvanic ignipuncture with very satisfactory results. Later in the disease these capillary ramifications enlarge so as to present a bluish and varicose appearance upon a red background.

TREATMENT OF PLANTAR AND PALMAR KERATODERMIA.

Dr. Brocq (*Journal Des Maladies Cutanées et Syphilitiques*, No. 11, 1894) calls attention to the obstinacy and proneness of this disease to recur. Internally, large doses of arsenic are of service. Locally, the indurated patches may be softened with prolonged baths, poultices, rubber gloves, compresses of hot water, covered with impermeable protective; then the epidermis is easily removed by a scraper or the nails. This treatment is then best followed by local application of black soap until all the epidermis is detached and only the thin subcorneous layer remains; then a glycerole of starch to which a-twentieth of salicylic and tartaric acids have been added is of value. After employing the black soap he also advises the use of the following formula:

Tartaric acid..... }	āā	1	0 grs xv
Salicylic acid..... }			
Carbolic acid.....		0	50 " vijss
Resorcine.....		1	50 " xxiiss
Lanoline.....		18	0 ʒiv, grs xxx
Vaseline.....		7	0 ʒj, ʒ4

ICTERUS AFTER THE USE OF MALE FERN AS A TAPE-WORM REMEDY.

Dr. E. Grawitz (*Berliner Kilnische Wochenschrift*, No. 52, 1894) warns against administering the extract of male fern-extractum filicis maris æthereum as a tænicide to those who are liable to liver affections, who are hard drinkers or have had syphilis, as this drug has a deleterious influence upon that organ, and may, in certain cases, lead to an interstitial hepatitis and which drug is possibly of significance in determining cirrhosis of the liver. Above all, he would not administer it at the same time with castor oil.

PRURITUS OF THE VULVA.

Dr. N. Guéneau de Mussy (*Spit.* No. 21, 1894) praises in the treatment of pruritus of the vulva, the following formula:

Glycerole of starch.....	20	0 ʒv
Bismuth subnitrate	1	0 grs. xv
Bromide potash	1	0 grs. xv
Extr. belladonna.....	0	25 grs. iv
Calomel	0	50 grs. viij

Apply locally.

* In charge of the translator, F. H. Pritchard, M.D.

TREATMENT OF CANCROID.

Dr. Brocq (*Journal Des Maladies Cutanees et Syphilitqiues*, No. 11, 1894) has observed the chlorate of potash and resorcine to be the remedies acting best in cancroids. In a diabetic male patient with granulating epithelioma of the prepuce he recommended local application of the finely powdered chlorate of potash and dressing with compresses dipped in:

Chlorate potash	50	0	ʒ jss
Resorcine	5	0	ʒ j¼
Distilled water	500	0	ʒ xv, ℥v

Instead of this the following salve he also recommends:

Resorcine	1	0	grs. xv
Chlorate potash	3	0	grs. xlv
Vaseline	20	0	ʒ v

GLYCERINE TO INDUCE UTERINE CONTRACTIONS

Dr. P. L. Ferrari (*Lo Sperimentale*, No. 36, 1894) after an exhaustive study of the question of the use of intra-uterine injections of glycerine to bring on uterine contractions, concludes as follows:

1. Glycerine injected into the uterine cavity to induce premature labor or abortion, is not reliable, in its action, neither as to the appearance of the pains, their intensity nor duration.

2. Glycerine is harmful and actually dangerous on account of the changes which it causes in the blood and the kidneys and it should be absolutely excluded in those cases where a renal lesion is either diagnosed or suspected.

3. Glycerine may be injurious to the child or even fatal.

INTESTINAL COLIC IN CHILDREN.

Dr. Ciro L. Urriola (*Rivista Clinica E Terapeutica*, No. 12, 1894) recommends highly the following mixture, in the colic of children:

Tr. Belladonna			gtts. xx–xl.
Destilled cinnamon water.	60	0	(ʒij).

A teaspoonful every hour until relief follows.

In treating the constipation which is the chief cause of the colic of these little patients he administers cod-liver oil in doses of three to five teaspoonfuls a day.

Dr. Escherich (*Ibidem*) in the treatment of chronic constipation accompanying chronic tuberculosis of the peritoneum or of the intestines in children, advises the use of the following formula:

Sulphate atropine		0	003.
Water	100	0	(ʒiij. ʒj).
Gum mixture	20	0	(ʒv).

To obtain the desired effect this preparation must be long continued. One may also at times administer a laxative. During the whole time that this mixture is given the pupils should be carefully watched.

SALVE FOR LUBRICATING SOUNDS.

Prof. Guyon (*Norsk Magazin for Lægevidenskaben*, No. 12, 1894) employs in his clinic, the following salve as a lubricant for urethral sounds:

Soap	50	0	(ʒjss).
Glycerine			
Water ää	25	0	(ʒvj).
Bichloride mercury	0	02	(gr. ⅓).

This salve is aseptic, does not irritate the urethra and renders catheterization easy.

CRÉDÉ'S PROCEDURE IN THE PLACENTAL STAGE OF LABOR.

Dr. Pelzer (*Hospitals Tidende*, No. 50, 1894) has collected one thousand cases treated by Crede's method a half hour after birth of the child and compares them with five hundred from the same institution treated by Ahlfeld's method—the placenta removed after two hours by a light pressure upon the uterus—finding that severe hemorrhages are far more frequent, puerpural febrile complications of the same percentage and a slightly less retention of membranes with the expectant treatment.

TRAUMATIC PULSATING EXOPHTHALMOS.

Dr. Hansen (*Muenchener Medicinische Wochenscrift*, No. 51, 1894) observed a woman who after being run over by a wagon developed signs of a fracture of the base of the skull and pronounced and pulsating exophthalmos of the right eye which, on auscultation, yeilded a blowing sound. This form of exophthalmos is, as a rule, the consequence of an arteriovenous aneurism of the cranial cavity from rupture of the internal carotid into the cavernous sinus. He intends to treat it by long continued compression of the carotid or if this fail, by ligation of that artery.

A NEW WAY OF ADMINISTERING COD-LIVER OIL.

Dr. Dietrich (*Revue Internationale de Medicine et de Chirurgie Pratiques,* No. 19, 1894) has succeeded in masking the disagreeable taste of cod-liver oil by the following formula:

Cod-liver oil	1000	o	℥xxxj ℥ij
Essence lemon	5	o	℥j ¼
Essence Clove	2	o	grs xxx
Essense peppermint	1	o	" xv
Vanilline	0	10	" jss
Cumarine	0	01	" 1 1-6

The cumarine and the vanilline are dissolved in the essential oils which are slightly warmed and this solution is mixed with the oil.

SALICYLATE OF SODA BY THE RECTUM.

Prof. V. Ziemssen (*Wiener Medizinische Presse,* No. 52, 1894) in those cases where there is a peculiar idiosyncrasy with regard to the salicylates advises giving it in clysters. Absorption takes place from the rectum nearly as promptly and with as good therapeutic results as though it were given by the mouth. From two to three grams (grs. xxx—xlv) at a dose are dissolved in fifteen to twenty grams (℥ iv—v) of warm water and this injected; it may be repeated if necessary. The disagreeable symptoms of an overdose, as ringing in the ears and sweating also are observed with this method of administration, but the nausea and disgusting aftertaste are avoided. He can also recommend giving other disagreeably tasting remedies by the rectum as, for example, the different preparations of squills. As to the percutaneous use of the salicylates by means of a salve applied to the painful joints he also thinks quite favorably of it and has obtained with it good results. Absorption is accelerated by addition of turpentine to the formula, though it is not absolutely necessary for it will take place with the pure acid alone. He uses the following formula:

Salicylic acid Oil turpentine	āā 10	o	℥ijss
Lanoline	30	o	℥j
Vaseline	50	o	℥jss

TREATMENT OF ACUTE TONSILITIS.

Dr. Miles (*Rivista Clinica E. Terapeutica,* No. 12, 1894) advises in acute tonsillitis the following treatment:

Essence Eucalyptus	1	o	gtts xv
Spirits Camphor	5	o	℥j ¼
Tr Guaiac	15	o	℥iv
Glycerine	10	o	℥ijss

Every hour or two pour ten drops of this mixture upon a lump of sugar which is allowed to melt in the mouth.

When the fever is intense the following powders are of service:

Acetanilid Phenacetine	āā 1.25	(grs xviij)

Sufficient for six powders. One every four to six hours.

At the same time one may apply externally to the neck the following:

Tr. Lobelia Tr. aconite root	āā 8	o	℥ij
Chloroform	10	o	℥ijss
Essence Turpentine	12	o	℥ij

Dr. L. Emmett Holt, in *Archives of Pediatrics,* summarizes the treatment of diphtheria as follows:

1. Germicidal treatment, preferable by the use of a strong hydrochloric acid, used early to be effectual; especially valuable in cases beginning on the tonsils.
2. Local cleanliness by the use of a weak antiseptic solution in the pharynx.
3. Nasal syringing with the same solutions in every case where there is nasal discharge.
4. Alcoholic stimulants begun as soon as the first systemic effects of the poison are seen, and in very severe cases pushed to the point of tolerance.
5. Calomel fumigations as soon as laryngeal symptoms appear.
6. Intubation in laryngeal cases not relieved by fumigations.

Ipecacuanha as a Uterine Stimulant.

Drs. Stillmark and Utt, of Russia, after a series of experiments upon parturient women, have demonstrated that ipecacuanha is a valuable stimulant to the contractions of sluggish uterus during labor. They administered three successive doses of ten drops each of wine of ipecac at intervals of ten minutes. In from twenty to thirty minutes the contractions of the uterus became of normal strength and duration. In but one case were the contractions of the uterus noticed to be spasmodic in character, and the observers conclude that ipecacuhanha possess much less tendency to cause tetantus of the uterus than ergot.—*La Semaine Medicale.*

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SATURDAY, MARCH 30, 1895.

EDITORIAL.

MEDICALLY PURE IN ART.

In another column we reprint a letter to the editor of the *Medical Record*, from an honored member of the American medical profession, anent the subject "Scientific versus Obscene Medical Literature."

Everything considered, the New York Academy of Medicine is, perhaps, the most influential and aggressive medical organization in this country. It has not hesitated to exert its influence in public affairs when the opinions of medical science were important for public good. No further explanation for the medical supremacy of New York is necessary, when there exists a profession whose representative men devote time and thought to the enlargement of public weal rather than to the curtailment of private competition. Whatever may be the local differences, and however intense may be individual or factional feelings, the profession of that city is united for medical New York. It furnishes a significant lesson for other aspiring—or expiring medical centers, Philadelphia not excluded; and for selfish considerations if for nothing higher. It shows the unwisdom of becoming rapt in a too utterly soulful contemplation of the picturesquely moss-bedecked monuments of what has been, and indulging in an æsthetic languor superinduced by the exhalations of a ponderous dignity, in existence purely subjective. The mountain does not seek Mohamet in the dawn of the 20th century.

Dr. Jacobi's proposed measure may not be ideal but it is practical. It is an effort to advance and THE REPORTER gives it cordial approval.

A closely allied evil, although operating more within professional limits, may be denominated "Scientific versus Obscene Medical Illustration"—a distinction as well defined in pictures as in letter-press.

It is needless to urge the utility, and even the necessity of illustration in medical literature. At the very best, medicine does not afford a field rich in subjects suitable for "high art" in its general application.

Medical illustrations may be classified, according to the purposes of their produc-

tion, into three groups. Those familiar with medical literature can promptly refer to its proper category every illustration presented, without a detailed description of the groups more than may be inferred from a candid answer to the question, Why this illustration?

The first group, which may be said to include the major part of medical art, is presented purely to aid in accurately comprehending the meaning of the context. Such illustrations often are as necessary to the proper elucidation of the subject-matter as are figures to a successful demonstration of problems in geometry. This is the legitimate function of art in medical literature, and the more accurately and elegantly it performs its office, the greater becomes its value. As might be expected, this group contains almost all diagrams and conventional figures, colored plates, and the greater portion of hand-wrought illustration. Contrary to the popular impression, a large share of process-reproductions of photographs from life are excluded from this first group, and for reasons obvious when the mechanical difficulties to be overcome are taken into consideration.

In the second group will be found such illustrations as are made to sell a book, or perhaps to gratify some little personal vanity. Instances of the seductive representations of canvassers who enlarge upon the magnificent pictorial display of the forth-coming work and discourse learnedly concerning "half-tones" and "photo-gravures" etc., etc., while meditating a raid on the doctor's pocket-book—such instances have become every day incidents in the lives of most medical men, especially distasteful to those who have subscribed in haste to repent at leisure. Not infrequently it happens that illustrations of this class are not only useless but are obscene—that is to say they rank very high as specimens of "pure (!) art". To this class belong also those illustrations which are sometimes used to enlighten the darkened understanding of medical men as to the applications of office-tables or other paraphernalia devised for the peculiar needs of medical practitioners. We have never yet seen a picture of this class which the wildest stretch of the imagination could regard as artistic, while in most cases it would be base flattery to call them vulgar. As to the protraits which exist mainly for the gratification of some little personal vanity and the desire to preserve to posterity the counterfeit presentment of one ambitious for fame, such pictures are generally as harmless as they are useless, but occasionally they bring retribution out of all proportion to the fault committed. A recent instance of "vaulting ambition, which o'erleaps itself, and falls on the other," the ambitious one, who, "only reaps from the hopes which around him he sows, a harvest of barren regrets," is found in the case of a brilliant young gynecologist whose features will be remembered by the readers of the twentieth century because of an incongruous association of ideas, no matter what visions of power and excellence the mention of his name may call up. This unfortunate individual had the imprudence, in some artistic production peculiar to his special work, to permit the foreground of some destinctive illustrations to be filled with most excellent photographs of himself, at the same time the only other striking feature in the group being to say the least, embarassing. He can derive no comfort from the situation, for the portraits are practically useless for any other purpose.

For the third group of illustrations occurring in medical so-called literature, but one reason may be assigned—as our Southern friends might express it, "pure, low-down on'riness." This style of art will ofttimes be found interleaving the advertising pages of some medical periodicals, in other respects not necessarily disreputable. For these illustrations the

very best that may be said is that they are obscene, and that under any circumstances they are unpardonably out of place in the pages of a medical journal, no matter how refined artistically or how pure in art aspiration such a journal may be. Undoubtedly these publications are under the ban of federal law even when construed most liberally. Their suppression would benefit medical science and medical literature would never notice their disappearance.

"SCIENTIFIC VERSUS OBSCENE MEDICAL LITERATURE."

To the Editor of the Medical Record:

SIR—Under the above heading you published in your late number an editorial, which presumes to believe that for some reason or other, medical literature could be excluded from its present mail privileges if obscene literature were, through the passing of a strict and special law, prevented from enjoying them.

"Permit me to copy the wording of the bill proposed by me for the consideration and acceptance of the Medical Society of the County of New York, and of the New York Academy of Medicine. They were as follows:

"'Be it enacted, etc.,

"'That medical books, pamphlets and circulars, the contents of which are of a character not proper for general and indiscriminate perusal or circulation, shall not be admitted to nor transmitted through the mails unless enclosed in sealed envelopes or wrappers, and prepaid at letter rates of postage, *or unless addressed for delivery to or in care of physicians, surgeons, medical schools or colleges, or students in such schools or colleges, or to dealers in medical publications, and directed to them as such.'*

"It appears, Mr. Editor, you overlooked the last clause of the proposed bill altogether. If it were passed no medical journal or book would be interfered with, indeed, medical men and students, schools and dealers, would still enjoy the advantage of receiving, free of cost, their advertisements of 'Dr. W., female specialist,' of the 'Power Wafers,' of the 'Constitutional Tonic Wafers,' of the 'Way of Escape,' etc. It is true our boys and girls would not so easily be reached by the miscreants, as hitherto. Nor would they be told where the office can be found, and when, and at what price, where their bodies may be defiled, and their souls contaminated. A prominent postmaster in the United States received the following note from a father: 'The enclosed disgusting pamphlet was received through the mails by my son (fifteen years of age) yesterday. I do not know whether it is a violation of the postal regulations to use the mails for transmission of matter of this kind, but I consider it decidedly indecent and demoralizing.' This note was accompanied by a glaring circular describing 'how the celebrated Sultan's or Turkish wafers came to be introduced to Americans.' It was the same postmaster who suggested to me the bill as printed above. It is at present in the hands of the Hon. E. J. Dunphy, a representative of this city, who is a member of the House Committee on Post Offices and Post Roads. I do not say it is the best possible bill, but it is a better one and more efficient than you supposed it to be in your editorial of last week, and does not in the least interfere, as you will now admit, with the unhampered circulation of *medical* journals, magazines, pamphlets, or books. It will, when passed, protect to a certain degree against the filthy sheets disseminated by quacks as privileged mail matter.

"You, Mr. Editor, and your colleagues of the medical press, have great facilities in impressing and directing the conscience of the medical profession and the public at large. As that is so, your duties and responsibilities are just as great, and I fully believe you will benefit the community by again studying, and then recommending (amended, perhaps), and urging upon the representatives of the people, the bill introduced by me at the suggestion of a gentleman who had great opportunities to learn of the vast amount of obscene

literature distributed over the country, under the protection of the law of the land." Very sincerely yours,

February 26, 1895. A. JACOBI, M.D.

["After this explanation we not only agree perfectly with our distinguished correspondent, but give the measure our heartiest endorsement.—ED. MED. REC."]

ABSTRACTS.

A CASE OF ANESTHESIA WITH DEATH, AND ATTEMPTED EXTORTION SUCCESSFULLY RESISTED.*

EDEN V. DELPHEY, M.D., NEW YORK.

Among the many trials, troubles, and tribulations of members of our profession, is the one wherein some designing and unscrupulous person thinks he sees a short road to wealth by mulcting the family physician in a suit for damages.

Having recently, with a brother practitioner, been the victim of such an attempt, having together successfully resisted the attempts at extortion in a court of law, and being informed that no case of this kind and character has ever occurred in this State, we think it best that a statement of the facts be placed on record.

On February 13, 1892, Dr. A. H. Goelet of this city asked me to go with him to see a patient and perhaps to give an anesthetic for the purpose of amputating a gangrenous finger. On arriving at the patient's residence and after removing the dressing we agreed that it would be inopportune to operate at that time. On the 19th of March, following, while calling at the doctor's office, the patient came in and together we discussed the operation which was set for the following day, on which day, the 20th, we went to the patient's residence, began to give the anesthetic, and the patient died. Inasmuch as the facts and circumstances relating to the administration of the anesthetic, the attempts at resuscitation, etc., were brought out in the suit for damages, and are clearly and concisely stated in the hypothetical question, attorney's address, and judge's charge, they will be recounted later in that manner.

A few days after this unfortunate occurrence, we were each visited by a representative of a so-called "Society for Protection from Personal Injury," who stated that a suit was about to be begun and tried to induce us to compromise the case, but knowing we had done no wrong, regretting the misfortune as much as any one, and having the welfare of other members of the profession at heart as well as our own, we declined to do so. Some little time later we were again visited by another representative, who was very arrogant and abusive in his endeavor to extort money.

The trial, after many days, finally began in the Supreme Court before judge Truax, on Tuesday, April 24, 1894, and ended Friday, April 27, 1894, the jury bringing in a verdict in our favor.

The experts for the defense were: Drs. T. Gaillard Thomas, William T. Bull, Robert Abbe, J. West Roosevelt, Herman J. Boldt, Edwin B. Cragin and Ferd C. Valentine, and the hypothetical question was as follows:

HYPOTHETICAL QUESTION.

Q. Assume that a patient of about 52 or 53 years of age had gotten a splinter in the forefinger of his right hand; that it affected the bone, that gangrene set in, that he had septic symptoms, that he went to a physician's office one evening to have his hand dressed, and on examining it, the physician found that the bone could be taken out without giving an anesthetic, but he said he would not be able to bear the pain of it without an anesthetic; that the physician made an examina-

*Read before the 11th Annual Meeting of the New York State Medical Association, October 9th, 1894.—From the Amer. M. So Bul.

tion of his heart, his lungs, and his urine, and found that they were normal; that the physician attended with an assistant who was accustomed to give anesthetics to perform an operation of amputating the diseased finger; that while the physician was preparing his instruments the patient remarked: "Doctor, you are not going to give me chloroform, are you?" and the physician told him he would give him chloroform only in the beginning, as he would need less of the anesthetic; that the patient said nothing more; that the assistant also made an examination of his heart and lungs and was present and watched the physician when he made an examination of the patient's urine and coincided with his opinion of the results found by such examination, and that urine contained neither albumin nor sugar, and was normal. That the assistant asked the physician if he should commence with chloroform, and the physician said "Yes," and that then the patient was lying on the bed, partially undressed, prepared for the operation; that chloroform was administered by means of an Esmarch inhaler, and that the chloroform was dropped, drop by drop, on the inhaler from above; that about a half and not more than a fluid dram was used; that during the inhalation of the chloroform the patient began to resist, and threw his arms about the bed; that the physician sat on the side of the bed and took hold of the wrist of the sore hand so he would not injure it; when he became quiet the physician turned away to prepare his instruments, and while doing so he heard the patient breathing stertorously, that chloroform was laid aside for about one to two minutes until there were signs of returning consciousness and the stertorous breathing had changed to quiet and normal breathing. That either was then substituted for chloroform, and administered by means of a cone made of folding paper and towel, that shortly after the assistant asked the physician to help him, saying that the patient had stopped breathing. That the physician went quickly to the opposite side of the bed, and with the assistance of another person in the room, elevated the patient's feet and suspended his head and shoulders over the side of the bed, so that the assistant could make efforts at artificial respiration. That the assistant worked on the patient to produce artificial respiration, by the assistant grasping him by the elbows, pressing them forcibly against the chest, then extending them over the head, pretty well back, and repeating this performance about twenty times a minute for about half an hour, but without avail, that only after the heart had ceased to beat were efforts to resuscitate discontinued.

Now, in your opinion, did or did not the physician and his attendant or assistant use the proper and usual course adopted by physicians and surgeons in such cases?

A. Yes.

Assuming the same state of facts, did or did not the physician and his attendant or assistant practice and observe the usual methods generally and ordinarily adopted by physicians and surgeons in such cases?

A. Yes.

Assuming the same state of facts, did or did not the physician and his attendant or assistant practice and observe the usual methods generally and ordinarily adopted by physicians and surgeons skilled in performing such operations?

A. Yes.

Assuming the same state of facts, did or did not the physician and his attendant or assistant practice and use the care and skill ordinarily used and employed by skilled physicians and surgeons in administering chloroform or either?

A. Yes.

Assuming the same state of facts, in your opinion, had or had not the physicians committed malpractice?

A. Certainly not.

The attorney for the defense was Albert C. Aubery of this city, and after thanking the judge for his fair decisions and the jury for their patient attention, reminding them that His Honor was judge of the law and they were sole judge of the facts, and that their responsibility was no light one, as on their decision hung the future professional hopes and prosperity of the defendants, he said:

Now, gentlemen, what is this action? By whom is it brought? Against whom is it brought? And what will be the result of your decision? These are questions to which I propose to call your attention, requesting the same degree of attention on your part to what I may say that you have already given to this case.

This action, gentlemen, is to recover

the sum of $5,000 from the defendants by the plaintiff for alleged malpractice.

The plaintiff is the widow and administratrix of M. L., deceased. She sues as such administratix, under the statute of the State of New York, claiming that amount of damages—mark you, gentlemen, damages!—for wrongfully causing the death of her husband. She claims that the defendants administered to her husband chloroform, a deadly anesthetic, in their capacity and occupation as physicians and surgeons, so negligently and unskillfully as to cause his death, thus depriving her and her children of their only support. She also claims that chloroform was administered to her husband by the defendants contrary to her husband's expressed request, and contrary to her request and that of their children. The husband of this plaintiff was afflicted with gangrene of the forefinger of his right hand. The finger was to be amputated. The defendants were employed to perform the operation. They deny all charges of negligence, or of other improper conduct. I think, gentlemen, you will agree with me that I have made a fair statement of the case, and by whom it is brought.

As to the question against whom it is brought, you, gentlemen of the jury, have seen them here. Ever since this case has been on trial—now its fourth day—the defendants have been in court, their future professional reputation dependent upon your decision. They fear not the result, for they conscientiously feel that there is not a man on this jury who will not decide this case under the solemn oath he took, when he was sworn as a juror, to render a true verdict upon the evidence.

After referring to the positions of the defendants in the community, he continued:

This suit, gentleman, is not brought against a branch or limb of the medical and surgical profession, but against the root and tree of that honored profession. It is a blow struck at its very foundation. A blow which, if you shall hold is well aimed by your verdict for the plaintiff in any sum, however small, means a deadly blow to that profession. But I believe better things of you. I have in you full confidence that you will render a verdict which will send both of these defendants back to the bosom of their respective families, now anxiously waiting their return, to gladden not only their hearts, but one which will be flashed over the electric wires, binding State to State as one common brotherhood, to every medical society in this country, that these defendants are not guilty of malpractice; that they are not malpractitioners.

What profession, gentlemen, is more honored than the medical? I know of none. The physician comes nearer to the bosom of your family and life than any other of the learned professions. While the minister and the lawyer in turn have their arduous work and duties, yet the medical profession is the one you look to so that you may have a clear head and perfectly healthy body for your daily labors. It is he who holds the secrets of your life. Your physician, in order to carefully administer to your every want and need in time of sickness, should know your whole system and life from the cradle. It is to him you reveal your whole life and deeds so he may judge how properly to relieve your sufferings so you may attend to your daily duties; and in your last hours on earth, he is often found to be the best comforter and sympathizer with those whom you may leave to mourn. What profession is more noble?

Gentlemen, there is more at interest here than if this were an action for debt. These defendants are not in debt to this plaintiff. They do not owe her a cent, and although this suit is one to recover money damages, the effect of a judgment for any sum against these defendants is far-reaching and significant. It means that they have been careless, negligent, unskillful, and untrustworthy in their professional conduct. This is the charge. Their professional reputation is attacked! This is a suit for malpractice, gentlemen; do not forget that! Now, what is malpractice? Let us see if the charge has been established, and if these defendants are malpractitioners. Malpractice is an improper discharge of professional duties, either through want of skill or negligence. In other words, it is negligence. That is a fair definition. Being an action for malpractice, it is one in tort, as we lawyers say. Now, the medical man holds himself out to the public, that he possesses the ordinary skill requisite for reasonable success, and that he will attend to the case put in his charge with due care. Hence, negligence in the medical man is a viola-

tion of the obligation that he impliedly enters into when he accepts charge of a patient, which obligation enjoins care and caution in what he does and what he omits to do.

He then explained that the burden of proof rested with the plaintiff, and commenting on the evidence and the results of the autopsy, which were "pulmonary œdema, pachymeningitis, old adhesion of lung on left side, kidneys show some changes, gangrene of the first finger of the right hand," said:

You will remember that the plaintiff's case was hanging by a hair, and it was only because I saw the trial was about to terminate by the withdrawal of a juror, resulting in a mis-trial, that I consented, in order that these defendants should have an opportunity to be heard, to admit that if Dr. Walsh, who had made the autopsy, and who is at present on the high seas, was in court, he would testify that the autopsy disclosed just what I have stated to you.

* * * * * * On behalf of the plaintiff, a Dr. —— was called to give expert evidence. He said he resided at ——avenue, in this city. He said he graduated from the University at Vienna; that he came to this country in 1875, and graduated in 1884 from —— College, in Chicago. In answer to a question of the plaintiff's counsel, he testified that no conscientious physician would administer chloroform to a patient having incipient disease of the kidneys. This was the counsel's climax. The height of this case had then been reached. The witness submitted most unwillingly to cross-examination. You will remember how I asked him question after question as to what effect chloroform would have upon the human system. Many books of standard medical authority —books which he was compelled to admit were standard authorities, whether he had ever seen them or not—were read to him, paragraph after paragraph, wherein all the authors had written and asserted exactly the opposite to what he had testified to. The only way in which he could crawl from the ridiculous position which he had assumed, was to say, "I don't agree with the author." He put himself up as authority against them all. Yet he had to admit, although he had held the position of a Coroner of some obscure place out in the Western part of this country, that he has had deaths in his practice while he administered anesthetics. What could be his defense in case a suit for malpractice should be brought against him, when all the standard medical authorities would be read in evidence, as against the method he had adopted or the remedies he had used? I confess I do not know. I fear he would have to throw himself on the mercy of his accusers, and beg. Contrast him, as a witness, and his testimony, with all the standard medical authorities here produced; contrast him and his testimony with the high character and reputation, city, State, and national, of Drs. T. Gaillard Thomas, William T. Bull, Robert Abbe, J. West Roosevelt, Herman J. Boldt, Edwin B. Cragin, and Ferd. C. Valentine, called to the witness-stand by the defendants—witnesses whose very words, thoughts, and advice are sought after by the learned of the medical profession. What did those eminent medical college instructors and hospital surgeons say? You, gentlemen, have heard how they have ridiculed him. Not one agreed with him—not one. Some simply said "No," when asked if they agreed with him; others said, "It was absurd." I challenge the plaintiff's counsel to produce another man of any medical knowledge who will testify that he agrees with him. He said no conscientious physician would give chloroform to a patient who had any kidney disease. The authorities read to you and the witness said, "Do not give ether." Would you, or any reputable physician, believe —— and give ether, when all the authorities tell you in plain words not to give ether, but affirmatively say, give chloroform? I will admit doctors do not always agree. It is not natural that they should. Some physicians will give chloroform in any case. Some will give ether in any case. The evidence has demonstrated that; but not a single expert witness testified that he should not give chloroform when the patient had any kidney disease. I think I can fairly dismiss —— as a witness in whose testimony you can place no degree of confidence or credit.

Now, gentlemen, what more did those eminent physicians and surgeons—men of national reputation—testify to? You will remember the long, hypothetical statement reciting all the facts proved in the case and the questions which followed it. All

the witnesses—yes, all, not a difference between any one—testified that the defendants were not malpractitioners, that they followed the best practice, and used all the care that could be used. They followed the usual course skilled physicians and surgeons follow in such cases; that they were not negligent in their practice in any respect; that their treatment was proper in every respect; that they all approved of etherization by beginning with chloroform.

Now, gentlemen, we will turn our thoughts to the family deprived so suddenly of its head. Mr. M. L. had a gangrenous finger. The defendant, Dr. Goelet, was his family physician, and on March 20, 1892, attended to amputate the finger with Dr. Delphey, who was to administer the anesthetic. An examination of Mr. L., the patient, as you have heard testified, was made in the usual way and manner the day just prior to that set for the operation. Under the anesthetic agent, he died. The defendants deplored and greatly regretted the death. It was an accident, an unforseen and unexpected event, which no finite being had any reason to expect. The event is greatly to be regretted by all. But, gentlemen, this is not a case of charity. No one would be more liberal to aid and assist the afflicted family in case of need than their family physician. But when that trusted, competent, and skillful family physician, and his able assistant, are attacked unjustly for malpractice, and proclaimed to the world to be malpractitioners, there was no other course left them to defend themselves, their honor, their integrity, their ability, their lifelong study, their professional reputation. That is what is at stake in this action.

There is an element in this case to which I must call your attention. You have doubtless observed, gentleman, that the plaintiff's counsel, by all the pertinacity he could possibly bring to his aid, insisted that these defendants should not testify in this case in their own behalf. He based his objection to their testimony on the ground that the code relating to legal practice prevented physicians disclosing any information obtained in their professional capacity. You will remember when Dr. Goelet was called by me as a witness, the plaintiff's counsel at once stated his objection, and made a preliminary examination of the doctor, to ascertain whether the information which he obtained and was about to testify to was obtained in his professional capacity as a physician. The doctor answered that it was. Then the counsel's objection was formally stated to the court, to wit: That the doctor was not a competent witness, as the information was sacred, and he should not be permitted to testify. What was that done for, gentlemen? The evidence on the one hand had been given. Evidence had been presented that the doctors, these defendants, did and said this and that, and yet the counsel asked His Honor, presiding over the trial of this most important case, to decide that the defendants could not testify, virtually clasping and fastening over the mouth of these defendants a sold mask to prevent them from giving their version of the unfortunate accident. Oh, no, gentlemen; he was unsuccessful! His objection was promptly and justly overruled, and the proposition decided adversely to him. Then each of these defendants told in turn all that each of them had said to the deceased; what the deceased had said to them; just what they did, and how the unfortunate death of Mr. L. happened. I will not recite it to you. You have heard all the evidence, and wherever there is any difference of question of fact presented by the evidence you are to decide it. What is more reasonable than the defendants' position that an unfortunate accident had happened, for which they, in law, are not responsible?

You have heard the witnesses testify that death will happen suddenly from chloroform, and also from ether, even with the utmost care on the part of the surgeon. There is no dispute of that fact. I have shown you by evidence that all care was used by these defendants. The anesthetic was administered in a manner approved by the best medical authorities. I have demonstrated that these physicians were justified in administering the anesthetic as they did. What now remains? Your verdict in their favor. That is now asked, and justly so. I am about to leave the case of the defendants with you. The curtain of this trial is being dropped, and when submitted to you by His Honor's charge, we will await your verdict. What will that verdict be? We feel confident it will be for the defendants. Think of it

carefully, gentlemen. What will a verdict for the plaintiff mean? Let me tell you in a few words. As this is an action for damages in tort, it can be followed by an execution to be issued against the person of these defendants to incarcerate them behind prison bars. It will be remembered by every surgeon in this land, and no surgeon will dare give an anesthetic agent until an iron-bound contract has been signed by the patient, holding the surgeon blameless for all consequences. Think of it, gentlemen; a verdict for the plaintiff! One of you, who may render such a verdict in this case, may be injured in a few days. You may be seriously injured; amputation may be necessary to save your life. You are in great pain, and suffering severely; and the injured member, be it a foot, a hand, or a finger, must be amputated to save your life. Your life's blood is slowly but surely dropping away. You exclaim: "Doctor, I can't stand it any longer! Hurry and give me something to relieve the pain, and amputate!" All is ready for the operation, but your physician suddenly remembers the case of L. against Drs. Goelet and Delphey, in which the jury decided against the defendants. Then your physician tells you, "Not yet; you must wait until I can see my lawyer, and have a contract prepared for you to sign, to protect me in case of an accident of any kind." In the mean time, you lie suffering, perhaps dying. Think, gentlemen, carefully, what results a verdict for the plaintiff in this action will bring.

And now, gentlemen, I am about through. In you we have all confidence that the case is in good and careful hands. In leaving with you this case, I must call your attention to one word in the lexicon more bright than any star in the constellations. I think I can now see it standing out in your attentive and watchful eyes, and that word is that ever far-reaching and effective word, "Justice." Do justice in this case, and as the years roll on and your time comes to leave your dear ones behind you, may you never, never have any cause to regret the verdict given by you in this action. In all sincerity, in all hopefulness in the right, and that justice will prevail, I have confidence in asking you to return a verdict for the defendants.

JUDGE TRUAX'S CHARGE.

Gentlemen: This action is brought by the administratrix of M. L., deceased, to recover compensation for the death of her husband. She alleges that, on the 20th day of March, 1892, the defendants, contrary to the repeated objections and expostulations of M. L., administered chloroform in such quantities as to cause his death on that day, and that such death was due solely to the improper and unauthorized administration of chloroform carelessly and negligently given, as aforesaid, and to the want of ordinary care and skill of the defendants, and of each of them.

The defendants deny these allegations; that is, they deny administering the chloroform contrary to the repeated objections of the deceased, M. L., and they deny that the chloroform was administered in such quantities as to cause death, or that it was administered in an improper and negligent or careless manner; so that you have, I might call them, two issues to determine: First, was the chloroform administered against the objection of M. L.; and, secondly, was it administered carelessly, negligently, or unskillfully?

Now, upon these points, the plaintiff has the burden of proof; that is, she must establish from the evidence in the case that the chloroform was administered by the defendants against the objections of M. L., or that if it was so administered, it was administered carelessly and negligently, and unskillfully, before she can recover in this action. If the evidence has left your minds in such a condition that you cannot answer these questions either one way or the other, then the plaintiff has not proved her case, and your verdict should be for the defendants.

You will observe that I have submitted the case to you in two aspects. The first is, did the defendants administer chloroform contrary to the objections of the deceased, M. L., and the second was in reference to the skill with which the chloroform was administered. You are to determine from the evidence whether or not M. L. objected to the administration of the chloroform. You have heard the testimony of the plaintiff upon that point. I charge you that an objection made by Mrs. L., or by the daughter, is

not an objection that the defendants in this action were bound to give heed to, especially when you consider that Mr. L. himself was present. Their wishes do not bind the defendants in this action. I do not pretend to repeat to you the exact words that were used by Mr. L., but you may remember it was something like this: Mr. L. said: "Don't give me chloroform, Doctor;" and then he said, subsequently, about the same time: "Don't hurt the old man, Doctor."

The statement of the witnesses for the plaintiff is denied by the defendants; that is, the defendants say that Mr. L. did not give a positive command not to administer chloroform, and, therefore, I leave this question of fact to you, to be determined from the evidence in the case. But if you come to the conclusion that the deceased did, in fact, say, "Don't give me chloroform, Doctor," I leave it for you to determine whether that was meant as a command, or whether it was the expression of a wish on his part that he was not to receive chloroform, the same as the other expression, "Don't hurt the old man, Doctor," or "Don't hurt an old man." That question of fact, which you will discuss among yourselves when you reach the jury-room, is to be determined by you from the evidence.

Now, if the doctors, against the wish of Mr. L., administered to him chloroform, they became trespassers on that moment, and they are responsible for the results of their trespass. I charge you that the evidence shows that Mr. L. died, not because chloroform was administered, or because ether was administered, but that he died because some kind of an anesthetic was administered to him; and you must find from the evidenee in the case that he died because chloroform was administered to him, for you can hold the defendants in this action upon the trespess view of the case, that I have presented to you.

There is another view that I have suggested to you, and that is the one relating to the skill and care and knowledge of the defendants. The law requires that physicians and surgeons shall be skillful in their profession, and that they shall exercise reasonable and ordinary care and diligence, care and dilligence proportionate to the importance of the case in hand. Physicians, however, do not insure success; they are only bound to have the ordinary amount of knowledge possessed by the average of the profession, and they are bound to use only that degree of care and skill that the nature of the case requires; that is, if it is an important case, if they are administering a deadly drug, they are bound to be more careful than they are when they administer a comparatively harmless drug.

Now, you are to determine whether the physicians have violated this rule that I have laid down to you; whether they have, in this case, failed to exercise care and skill. If they have not, then they are liable for the consequences of their act. If they have not, they are not so liable.

You have listened attentively and patiently, I have noticed, for the last two or three days to the discussions of the physicians upon this point. You have heard references made to the condition Mr. L. was in at the time the operation was performed. The doctors have told you of the examination that they made, and they have told you what they found and what they did not find; and then you have heard the other physicians testify as to whether or not their conduct under the circumstances was or was not careful.

It is unnecessary for me to go over all this testimony, because I know that it is comparatively fresh in your minds, and that it will be freshened up when you talk among yourselves. If the physicians used due care, they are not liable, no matter what the result of their action was.

You can easily see that, if a physician at all times was to be held liable for the bad results of an operation performed by him, we would have no operations performed, or any physicians to perform them. They would not take the responsibility; but they do hold themselves out as possessing special knowledge in their profession, and do also hold themselves out as exercising care and skill. If they do exercise care and skill, as I have said to you a number of times, they cannot be held liable. If they do not, they may be held liable. It is for you to say whether these physicians have violated the rule I have laid down to you.

The plaintiff sues to recover $5,000 as compensation for the death of her husband. She is entitled to recover such sum as will represent in your minds the pecuniary loss resulting to the next of kin of M. L. from his death, not to exceed

$5000. The statute allows you to fix the damage anywhere within the limit of $5,000, and you are to determine what sum, if you come to the conclusion to find for the plaintiff, will compensate the next of kin of M. L. for the pecuniary loss occasioned to them by his death. You have heard the testimony from his wife as to his earnings, and as to his general condition. You must remember, at this particular time, he was not the well M. L. of a few weeks before, but, on the contrary, was suffering from a gangrenous affection of the finger.

I think that Dr. Thomas, in referring to that, said: "You wouldn't let the man go and die, would you?" Therefore, you must take into consideration the condition that he was in at the time that they gave him the anesthetic.

The jury rendered a verdict in favor of the defendant.

HOW TO RIDE A BICYCLE.

The proper position for a bicycle rider is, in the first place, an upright one. He should push nearly straight downwards with his legs—not backwards, as one must do who leans far forward. His arms should not be rigid and extended to their full lenth, but a little bent, and the handles can be easily adjusted to bring this about. The reason for the bent, or slightly bent, arm is evident after a moment's thought. If the arm is stiff, rigid, and extended to a full length, the "pull" which you give the handles on going up hill or, indeed, while running along a level road, is a dead pull. There is no life in it. Each jar to the machine is a jar to your body, your head and neck, and consequently a jar to your whole system. On the other hand, if you ride with the arms a little bent, and acting as a kind of buffer to all jarring influences, they will save you an injurious though unnoticeable shaking up each time you go out. The only way in which you will notice a change will be after you have become accustomed to the bent-arm method. Then you will find you can ride longer without becoming tired.

Another feature of this stiff arm is the position into which the shoulders are thrust. Try it; grow a little tired with a long ride, and then see where your shoulders are. You have gradually come to lean on your arms for rest. Both shoulders have been thrown far back; your head and neck are stretched far forward, and your chest has, so to speak, sagged forward out of its natural position. Keep this up long enough, and you will be a fine-looking specimen.

No, the weight of your body should never come on the hands and arms, but on your thighs, and thence be transferred to the seat, with the unconscious springy action of your legs, which in a measure allows some of your weight to come on the pedals. In this position your hands are free to guide your wheel; you body is erect; you do not then get into the habit of swaying from side to side to put more weight first on one side, and then on the other; and your whole muscular development is regular and normal. Try riding without putting either hand on the handles and sitting erect. If you ride well, you can easily keep you balance, and in an instant you will be in the correct position. Once in this position, place the hands lightly on the handle-bars, and you will be in a healthy, proper situation to gain benefit from your riding.

In riding ten miles, for example, I should never go the whole distance at one pace. Slow, steady riding has its merits, so has sprinting for short distances. When a good clear road looms up ahead, have a brush for two or three hundred yards with the boy who is with you. These little races are good things. They quicken your movements, and they keep you from forming bad habits, or letting your body sag into set, immovable positions. They also bring the muscles into a different kind of play.

In fact, in bicycle riding as in everything else, you should remember that there is a right and a wrong way; that you need not only endurance but speed, and that changing from one to another, keeping up variety, is one good way of avoiding bad habits.—*Harper's Young People.*

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

February 13, 1895.

ACETANILID VS. QUININE TO ABORT CHILLS AND FEVER; AND ACETANILID AS A DUSTING POWDER.

(See page 444.)

DISCUSSION.

DR. J. M. ANDERS: The paper which has just been read reports certain clinical facts of lively interest based upon personal observation. It seems strange at this time that anyone would assume to have obtained better results from the use of acetanilide in malarial intermittents than from the use of quinine. Unfortunately Dr. Brodnax does not offer any experimental facts upon which to base an opinion of the mode of action of the acetanilid. The well-known antiseptic action of the drug is the only explanation that I can offer. I believe that Dr Brodnax is a careful and reliable observer, and do not question the fact that cases of chills and fever were cured after even single doses of acetanilid. Although we have entered upon days of scientific therapeutics, I do not think that the days of rational empiricism have entirely passed away. We know that quinine cures chills and fever. Since that discovery nothing has been brought forward that will supplant quinine in the treatment of that disease. It is not impossible that such a remedy may be found; it may be that Dr. Brodnax has found it in acetanilid. I have met with cases of malarial intermittents in persons in whom there is an unpleasant idiosyncrasy against quinine. Now, in such cases, a better substitute for quinine than those we have at present would be welcome and of great advantage.

The question whether or not there are objections to the use of acetanilid might be asked. The statement has been made that acute dilatation of the heart sometimes occurs in intermittents. Now, it is known that acetanilid is a cardiac depressant, and in toxic doses has produced death by paralysis of the heart. While I do not consider this a bar to the use of acetanilid in the doses prescribed by Dr. Brodnax, I think that this influence makes it necessary to guard the heart during the time of its administration. If subsequent experience support these observations the profession and members of this Society should give a vote of thanks to Dr. Brodnax for a new remedy for malaria, and one which promises to rank as a specific.

DR. J. A. CANTRELL: My experience with acetanilid in the treatment of disease has been in two hundred cases, or more, of skin eruption, especially intertrigo and eczema. I believe it to be the antiseptic that we are looking for in the place of iodoform. It does not have any irritating qualities that iodoform has, and, in fact, a great many cases of iodoform irritation have been cured by it. In very moist cases of skin disease it acts as a drying powder and also as an astringent. In other cases, like zoster, it acts well, dries up the eruption, and apparently it acts as a stop to the disease; at least, it seemed at the time as if acetanilid had produced this action.

DR. G. G. DAVIS: Nobody would be more glad than myself for a satisfactory substitute for the foul-smelling iodoform. Combinations have been brought forward of boric acid and other substances with iodoform. The mixture of boric acid I prefer to the pure iodoform. The boric acid breaks up the lumps which the iodoform contains and makes it a more manageable substance as a dusting powder. I have also used acetanilid by itself, but have been unable to persuade myself that it is the equal of iodoform for surgical purposes.

DR. EDWARD MARTIN: I have used acetanilid in about a thousand cases of suppurating wounds, and my experience is, in these cases, that it is superior to iodoform. It is less toxic, for one thing. It is very common among surgeons to ob-

serve in slowly healing wounds dressed daily with iodoform certain nervous symptoms, headache, and so on, indicating iodoform poisoning. This is not seen in cases dressed with acetanilid; the wounds keep perfectly dry, there is no pus, and, of course, no odor, and the dressings keep as clean as with iodoform. I shall continue to use it in place of iodoform.

DR. DAVIS: I think that the direction of surgical progress as regards the application of powdered antiseptic substance in recent wounds is on the decline, and I have no doubt that both the iodoform and the acetanilid will be eventually much less used than at present. Dr. Halsted, of Baltimore, makes an application of silver leaf take its place. Of course, drying powders will always be used in the treatment of suppurating wounds.

Dr. Makuen presented

AN INTERESTING CASE OF RAPID SPEECH DEVELOPMENT IN ADULT, FOLLOWING OPERATION FOR TONGUE-TIE.

(See page 445).

DISCUSSION.

DR. THORINGTON: I would like the patient to say anthropological and ethnological. (The patient repeated them distinctly.)

DR. G. G. DAVIS: This is an extremely interesting case, and an instructive one. As regards the relative parts which the operative procedure and the painstaking instruction have played in bringing about the result, it would be extremely difficult to decide which of them contributed the most. The part that the tongue plays in speech is uncertain, and I doubt if it is ever very important. Of course, in a person who has talked, and then has been deprived of his tongue or part of his tongue, speech is still intelligible; but whether an individual that had the tongue removed in infancy, would learn to talk is indeed a question. In this case there might have been some anatomical condition that would cause limitation of movement of the organ, or acted as an obstruction to prevent his learning to speak, until later in life, he was able to undergo the systematic instruction which Dr. Makuen ordered for him, which might in itself be instrumental in producing speech. I regret that these means for overcoming defects of speech are not better known than they are among physicians. The simple division of a tendon may be followed by elongation; but in the case of the tongue the resulting scar-tissue might restrict its movement still further. In this case there is a practical demonstration that the tongue is more movable. The report of this case is an encouragement to others to repeat this method in similar cases. I do not think that it is extremely rare to find cases where no device is able to afford relief; this is so where there is difficulty in pronouncing those sounds which are produced by the tongue held in contact with the roof of the mouth, it being sometimes impossible to place the tongue there.

DR. MAKUEN: The remarks of the last speaker are very pertinent to the question. I am sure I cannot say which was the greater factor in the development of speech in this case—the instruction or the operation. Certain I am, however, that the one would have been of little value without the other, for during the three months immediately preceding the operation I gave him very careful drill, which resulted in improvement on certain words, but in no improvement whatever on all those sounds which require a free action of the tip of the tongue. It was only after the operation that he could give these sounds at all. The shortening which usually follows cicatrization was prevented by free exercise of the tongue and by frequent traction. He can protrude his tongue three-quarters of an inch further than before the operation, and as you see he has acquired great faculty in articulation.

Dr. Spivak reports a case of

VARICELLA COMPLICATED WITH GANGRENE OF THE SCROTUM.

(See page 447).

DISCUSSION.

DR. J. ABBOTT CANTRELL: I regret that Dr. Spivak did not give more of the history of his case. When Hutchinson (J.), ("On Gangrenous Eruptions in Connection with Chickenpox and Vaccination," *Proc. Royal Med. and Chir. Soc. Lond.*, 1882, vol. ix., No. 3, pp. 88-91) gave the name varicella gangrenosa to this affection he stated positively that it did

not occur with any other disease than varicella, but since that time he has somewhat changed that opinion. Besides being witnessed in connection with varicella it has been seen with miliaria rubra and lichen planus by Crocker (*Trans. Med. and Chir. Soc.*, December, 1888), with purpura by Moore (*Austrian Med. Journ.*, 1889), Büchler's case (*Amer. Journ. Med. Sci.*, Phila., 1889, vol. xcviii., pp. 265-268) occurring under bad hygienic influences. In addition to this it has been witnessed as an independent eruption, such as the cases recorded by Crocker (*loc. cit.*), Payne (*Trans. Path. Soc. Lond.*, 1884 85, vol. xxxvi., pp. 471-475), Abercrombie (*Trans. Path. Soc. Lond.*, 1879-80, vol. xxxi., p. 383), Bowley (*Lancet*, London, May 30, 1885, p. 98), Elliot (Morrow's *System of Genito-Urinary, Syphilogy and Dermatology*, vol. iii., 1894), and others will testify.

Witley Stokes (Crocker, *loc. cit.*) recorded it, in 1809, as a pemphigus gangrenosus; Bazin (Elliot, *loc. cit.*) also thought it to be a pemphigus; and Carpenter (*Illus. Med. News*, London, 1888-89, vol. i., p. 173) refers to a case under the title of pemphigoid varicella. Simon recorded an example under the name of multiple cachectic gangrene (Elliot, *loc. cit.*).

Its usual seat is at or near the buttocks, the inner and posterior portion of the thighs, although it may be witnessed on any portion of the body; thus, Büchler (*loc. cit.*) saw it affecting the mastoid process, the ear becoming involved in the destructive process later. Jameison (*Trans. Med.-Chir. Soc. Edin.*, 1886-87, 1888, vol. vi., pp. 19-21) witnessed a case affecting the head, face, back, and upon the right thigh.

It begins as an erythematous spot, scarlatiniform in character, and this was seen in Stanifooth's case (*Med. Press and Circular*, 1890, N. S., vol. xlix., p. 37) to precede any other change for twelve hours. This is followed by a papule, visicle, vesico-pustule or a pustule. These, one and all, rapidly change into a pustule, and after it reaches the size of a split pea, or even before it becomes that size, it ruptures, and we have the formation of a crust. The lesion at this time is surrounded by a reddish or pinkish-red, or even a livid zone. In a short time the crust begins to separate, and after its completion the process generally terminates, but this is not always so. When the crust has been removed we see an ichorous, ashen-gray mass or a purulent secretion at the bottom of the ulcer, which has a ragged floor, the ulcer looking to be a punched-out sore—in fact, resembling the condition we have when a vaccination pustule is at its height. When the disease begins, or is in connection with a vaccination, it is witnessed first on the same arm, but not at the point of vaccination. Constitutional taint seems to have an influence upon the aggravation of the disease, but this is denied by Hutchinson. Thus, in Payne's case the child died of acute miliary tuberculosis; Abercrombie's showed double pneumonia, with recent pleuritis of one side; Howard's (*Brit. Med. Journ.*, 1883, vol. i., p. 904) case showed dulness on percussion, the little patient dying of pyæmia, and the autopsy revealed abscesses in one lung, while two ounces of pus was taken out of the pleural cavity; Bowley's case died of convulsions the day after discharge.

The disease is supposed to be due to a parasite, although a constant germ has not as yet been demonstrated. Ehlers found the bacillus pyocyaneus in two cases, Kallinger found the staphylococcus cereus albus in one, and still others have been found.

The prognosis is favorable without the intervention of some complication such as lung troubles, as mentioned, syphilis having a deleterious effect.

Treatment must be upon the strictest hygienic basis, the patient is to be supported and given tonics, as well as the best of food; locally, antiseptics are to be freely employed.

DR. SPIVAK: I have simply reported my own case, and I did not intend to review the extensive literature of the cases which I have collected; neither did I wish to discuss the mooted questions in pathology. I reported my case on account of three interesting points: (1) There was only one lesion in my case, while all the cases reported hitherto were multiple; (2) the size was unusually large—about a silver dollar in circumference—as can be easily judged from the photograph; and (3) there is only one case reported where the genitala was mentioned to have been affected, and no distinct reference to scrotum made.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE

Typhoid Fever.

Acting on the experiments of Werner, at St. Petersburg, showing that one-half per cent. of chloroform will kill the bacillus of enteric fever, and of McIntire, that carbolic acid not only controls the development of the bacillus but acts as an antiseptic on the intestinal canal, Dr. R H. Quill, of the British Army Medical Staff, in India, where the fever is most fatal, has treated all his typhoid cases the past year with the combined remedy, without the loss of a single case. The treatment was commenced by three grains of calomel, to clear the bowels of their contents, and followed by a mixture composed of thirty-six minims of carbolic acid, two drachms of the spirits of chloroform, three drachms of the compound spirits of cardamon, two ounces of syrup of nemidesmus, and added chloroform water to make twelve ounces. Of this mixture two table-spoons were given the first day every two hours; the next day five doses of the mixture were given, in iced water, and ten doses each day after, until there was a fall of temperature and marked general improvement, when it could be gradually decreased to three doses during the twenty-four hours, which should be kept up, to prevent relapse, for a week after the temperature was normal. Digestion continued in good condition, tendency to diarrhœa was checked, there was an absence of tympanites, and there was at no time any tendency to delirium or stupor, and convalescence was rapid.—*N. Y. Medical Times.*

Dyspepsia Treatment.

Dr. J. B. Marvin has narrowed down the treatment of dyspepsia to very simple remedies. He finds that the mercurials yield the best results. Cases of biliousness are benefitted by either small doses of calomel, or calomel and ipecac, or the blue-pill. They relieve constipation and stimulate glandular secretion. Where these substances are contra indicated, he prefers salines in hot water, to wash out the stomach and empty the bowels.

Rest is next in importance. Though a certain amount of exercise be advisable, rest, together with long sleep, will be more necessary in nervous and hysterical persons.

Two patients with emesis were successfully treated by very small doses of potassium bichromate—one-tenth or one-twelfth grain (say one-half ctg.) in solution and on an empty stomach, two or three times daily.

In cases of deficient secretion, he administers hydrochloric acid in large doses (Ewald's method). Where there is hyperesthesia or some other neurotic symptom, he uniformly uses ammonium bromide (five to ten grains [thirty to sixty ctg.]) with half a fluid drachm (two c.c.) each of camphor-water and glycerin, adding sometimes one to two drops of Fowler's solution.—*Ex.*

Tic Douloureux.

Dr. Jarre presented a report on the causation and treatment of tic douloureux of the face. His conclusions are as follows (*La Tribune Medicale*):

1. The disease known as spasmodic neuralgia, epileptiform neuralgia, tic douloureux of the face, etc., is due to a peripheral lesion seated in the terminal extremities of the fifth pair.

2. The exact and invarible seat of this lesion is a more or less extensive portion of the alveolar border of the upper or lower jaw, which is the seat of a cicatrix consecutive to former accidents of different kinds.

3. The intracicatricial location of the original lesion brings tic douloureux into the same category as the neuralgia of the toothless, and the neuralgia affecting the stumps of amputated limbs, both of which are also of cicatricial origin.

4. The rational treatment of tic, therefore, ought to consist purely and simply of the ablation of that portion of the alveolar border comprising the original seat of the disease.

5. The ablation is done by first incasing the soft parts with the galvano-cautery knife, removing the alveolar border by the bone forceps or saw, and subsequently rasping the wound in the bone.

6. The operation is not at all grave; the wound dressed antiseptically heals, ordinarily, in a few weeks without complications.

7. The results so far obtained give reason to hope that we are now in possession of a simple, rapid and harmless means of curing tic douloureux, a disease which, up to the present, has been classed with incurable diseases.—*Dominion Medical Monthly.*

Subcutaneous Injection of Carbolic Acid in Rheumatic Affections.

Dr. Andre Martin (*Bulletin Generale de Therapeutique*) calls attention to the value of carbolic acid used by hypodermic injections as a means of relieving the pain of rheumatism and other painful affections. He was led to employ carbolic acid for this purpose by the observation of surgeons in the use of the method of Lister, that even very feeble solutions of carbolic acid possessed a considerable analgestic power when applied to wounds. Baccelli, in 1890, cured a case of traumatic tetanus by the hypodermic injection of carbolic acid, the curative properties of which were attributed by him to the

sedative effect of the drug upon the excitability of the cord. Backzy treated headache by carbolic acid fomentations. Kunze and Gillepsie treated articular rheumatism by hypodermic injections of carbolic acid. Gillepsie injected two fifths of a drop of a ten-per-cent solution into inflamed synovial sacs or just outside of the inflamed membrane. He attributed his success both to the anesthetic properties of the drug and to a specific effect upon the ptomaines secreted by the microbes of rheumatism.

Benedick, in 1892, cured many cases of functional spasm accompanied by localized pain by means of local injections of solutions of carbolic acid. M. Cheron, with others, have introduced phenic acid into the formulæ of their artificial serums. M. Martin, encouraged by the results obtained by others, has within the last two years employed injections of carbolic acid in one hundred cases met in military practice, comprising the following: Muscular rheumatism, articular rheumatism, peripheral neuralgias, wounds, pleurisy, intestinal colic, and other injections accompanied by pain. The results reported from this treatment are sufficiently satisfactory to warrant further trial, especially in cases of acute localized rheumatic affections.

The Antiseptic Properties of Formalin.

The employment of Formalin as an antiseptic for the disinfection of rooms and buildings has again and again been advocated on account of the volatile nature of the formic aldehyde vapors. Some idea of the penetrating qualities of these vapors will be afforded by the results of experiments laid before the Paris Academy of Sciences last week by M. Trillat.

These experiments had been conducted on a most extensive scale, the apparatus being tested in rooms varying in size from 20 to 300 cubic metres. the walls having been covered with germs of very resisting nature at different heights. Various infected articles were also placed in the apartments. The results led to the conclusion being formed that the vapors took effect equally well both as regards height and depth, that is to say, that in consequence of the great diffusive powers of the gas it travels equally in all directions. The force of penetration of these vapors appears to be so great that, although they were used very diluted with air, drapery infected with germs and entirely purified—the various septic organisms with which it was inoculated being destroyed. Even wood was penetrated to a considerable depth, and the chairman, M. Friedel, drew attention to the fact that such results could not be obtained by the vapors of any other substance.—*New Eng. Med. Monthly.*

A Fatal Case of Uncomplicated Chicken-Pox.

The *Australian Medical Journal* publishes an article by W. B. Nisbet, M.B., Ch.M., Ed., of Townsville, Queensland, in which he remarks that it appears to be a generally accepted fact that varicella is such a trivial disease that no treatment is required, and, as complications are extremely rare, no precautions are necessary to prevent their occurring. West writes, says the author, "The disease is one so void of danger that it hardly requires any treatment;" while Collie, in Quain's *Dictionary of Medicine*, says, "No physician has recorded a fatal case of chicken-pox." For this reason, says Mr. Nisbet, the following case is recorded, which might otherwise seem too trivial to be worthy of note: A healthy baby girl of eight months showed signs of the eruption of the chicken-pox on September 30, 1894. Four older children in the house also had it, and an epidemic of the disease was running through the town at the time, so the diagnosis was a matter of no difficulty. For the first three days the case progressed in the ordinary way, the rash being by no means copious and the constitutional disturbance unimportant. But on the fourth day a new crop of vesicles made their appearance, and were so numerous that by the sixth day every part of the child's body was covered, even the soles of the feet and the palms of the hands. The eruption showed no tendency to become confluent, except over the back, which was constantly rubbed by the restless movements of the child. On the seventh day numerous spots appeared on the tongue, on the hard and soft palate, and on the inside of the cheeks; these changed to irritable ulcers on the ninth day, causing great distress, and on the morning of the tenth day the child died, without any other complication making its appearance. The temperature remained at or about 102° F. during the illness, only once, on the evening of the fifth day, reaching 103°. It fell to 98.8° on the ninth day and remained normal up to the time of death.

Mr. Nisbet thinks that death was owing to the immense area of skin involved, in the same way as a very extensive burn causes death from shock in a child. The exhaustion evidently was so great that at the crisis of the disease, when the temperature fell to normal, no amount of artificial stimulation could avert the fatal issue.

Singultus.

In a paper published in the *Physician and Surgeon*, Dr. D. L. Parker reports four cases of persistent singultus and the treatment employed. In each of the cases all the usual and known remedies had been tried without avail. In each case also, although the hiccoughing had gone on to the point of exhaustion of the patient, relief was at once obtained by dry cupping the abdomen, in two cases by ordinary drinking glasses, in the others by a cupping outfit. The author thinks, though we cannot see it as he does, that "the *modus operandi* of this remedy seems to be that by drawing forward a portion of the abdominal wall and thereby tending to enlarge the abdominal cavity, enough force is exerted upon the upper side of the diaphram, by atmospheric pressure to overcome its spasmodic action."—*N. Y. Medical Journal.*

The Danger of Apoplexy During Narcosis in Elderly Persons.

Senger (*Deut. Med. Woch.*) calls attention to this danger during the narcosis of elderly people, especially in those cases where there is marked arterial sclerosis. He believes this accident has occurred in many cases where the diagnosis has not been made. He finds no such cases reported in anesthetic statistics or in the literature at his command. The case reported is as follows: A patient, fifty-six years of age, suffered from sarcoma of the breast, and healthy kidneys and heart, and her pulse was normal; the arteries, however, showed sclerosis. During the anesthesia there was no marked excitation, although there was some vomiting Suddenly, while the face had been red, it became deadly pale and cold, the eyes fixed and expressionless, the pupils dilated and reactionless; the pulse could not be felt. The respiration, at first marked, became shallow and gasping, and then ceased altogether for a moment. Although the symptoms pointed to a centric and non-respiratory source of troubles, the author immediately began restorative measures, artificial respiration, external heat, and all the most approved means. After a short time the pulse and respiration again became normal, more chloform was given, and the operation completed. When the patient recovered from the ether she complained of stiffness in the right leg and arm, and difficulty in speaking, which proved to be a partial hemiplegia of the right side, which had occurred during the narcosis. Clonic spasm followed after a time in the lower extremity, but not so markedly in the upper, while the patient complained of cold in the foot. After six days the motion returned in part to the arm, but there was a relapse; when the patient left the hospital there was still considerable lameness, the leg having been slower in recovering. Two years later the paralysis had mostly disappeared, the foot dragging only slightly. The author believes this danger is greater with ether than with chloroform, as the arterial pressure is sustained longer in the former, and that consequently in elderly people with sclerotic arteries chloroform should be the anesthetic of preference.—*Amer. Jour. Med. Sciences.*

An Antidote to Hydrocyanic Acid.

The *Lyon Medicale*, says that M. Johann Antal, a Hungarian chemist, has discovered a new mineral compound, nitrate of cobalt, which promises to be a very efficacious antidote in cases of poisoning with potassium cyanite or hydrocyadic acid. Tried first on animals, this product has since been employed, always successfully, in more than forty cases of accidental poisoning.—*New York Medical Journal.*

Typhoid Fever in Infants.

The profession is gradually beginning to appreciate the fact that typhoid fever is more common in infants than was formerly believed. Various writers have contributed evidence to support this statement and Dr. I. N. Love concludes an article on this subject in the *Journal of the American Medical Association* as follows:

1. Typhoid fever occurs frequently in children than is generally supposed.
2. The fact that ulceration and hemorrhage is much less frequent would explain the absence of pronounced abdominal symptoms.
3. The erratic, undeveloped and hypersensitive nerve centers in early child life explain why the toxic secretions of the Eberth bacillus should make cerebral symptoms very pronounced.
4. Given a child of any age with or without intestinal disturbance, with a continued elevated temperature, with or without marked evidence of cerebral disturbance, the possibility of the presence of the Eberth bacillus of typhoid fever should be constantly kept in mind.

A Case of Peripheral Paralysis Following Varicella.

The case is reported by William Guy (*British Medical Journal*). The attack of varicella was mild, but about a fortnight after he was found in the morning to be completely paralyzed in his lower extremities. No paralysis in other parts. For three weeks there was no improvement. Shortly after this he made attempts at walking, but recovery was slow. At the end of three months he could walk fairly well. In addition to the complete muscular paralysis, there was considarable sensory loss. All the muscles of the lower limbs were involved, but the extensors were more profoundly affected. Knee-jerks and plantar reflexes were absent. Abdomidal reflexes were active. The child, which was two and a half years old, was slightly rachitic, but there was no sign of syphilis.

Infantile Scurvy.

In connection with a paper on infantile scurvy, Dr. Fruitnight reports the following case (*Archives of Pediatrics*) A boy, nine years of age, had, for a long time, subsisted on a diet made up chiefly of salted meats, dry rye bread, and black coffee. When seen by the author he had complained greatly of pains near the knee joints, which his mother termed "growing pains." There were oval swellings about both knee joints; they were very sensitive to pressure, and the boy made no attempt to walk, retaining the same position constantly on his chair, except when he would lie down. His gums were spongy, sore, and swollen, and bled very easily. He showed many minute ecchymotic points. His teeth were loosened and covered with tartar. Breath very foul. He had alternate constipation and diarrhœa, and was very anæmic. He was put upon anti-scarbutic diet, potatoes, fresh vegetables, fruits, lemonade, beef and mutton, with citrate of iron and quinine, with dilute muriatic acid three times a day. Within ten or twelve days he was practically well.

Smallpox Ameba.

Dr. Maximilian Herzog, of Chicago, claims to have discovered a "smallpox ameba," the presence which in the blood on the first or second day after vaccination is the only sure test of a successful vaccination. No matter how swollen the arm or uncomfortable the patient, the vaccination is not effective unless the "ameba" is found, the unpleasant symptoms being due to the vaccine points being loaded with croton oil, or some other irritant—*Boston Medical and Surgical Journal.*

Digestibility of Sterilized Milk.

Bendix (*Jahrbuch fur Kinderheilkunde*), has made researches upon sound and sick children as to the digestibility of both sterilized and nonsterilized milk. He concludes:

1. That in healthy children there is no difference as to the digestibility of the two milks.

2. In sick children the sterilized is digested just as well as the unsterilized, notwithstanding the fact that the absorption of fat and nitrogen is so much reduced in such children.

3. The taste and smell of milk, while they may be changed by sterilization, are not materially so, and sterilized milk is readily taken by children.

4. He has never seen the health of children badly affected by the use of sterilized milk. On the other hand, they eat well, grow, and their stools are normal, and they never have vomiting.

5. The transmission of severe diseases from animals to men is prevented by the sterilization of milk.

6. Sterilization is much preferable to Pasteurization, and heating the milk to 212° F., while it does not hinder its digestion, absolutely kills all bacteria and spores.

On the Value of Quinine as a Remedy in Cholera.

In this paper, which appears under the title of Is there a Better Remedy in Cholera? the writer strongly advocates the use of quinine, given either in powder or in solution by the mouth, as a remedy in this disease. Reviewing the list of remedies which kill the germs, he says that it is manifestly impracticable to kill the sprilla outright in the intestinal tract of a human being whom we expect to live, hence he looks for the least harmful inhibitant, which he considers undoubtedly to be quinine. Twenty or forty grains of quinine, given by the mouth, is sufficient to inhibit the development of the microbe in any quantity of the rice-water exudate presumably present in the alimentary canal. Absorption takes place to a very small degree on account of rapid peristalsis. Therefore symptoms of cinchonism are not noticed, even after repeated doses. He quotes statistics to show that in those cases where it was given in full doses by the mouth it has lowered the mortality in severe cases to twenty-five per cent., and only in those cases where it is has been given hypodermically did it prove ineffectual. At the same time other means of treatment should be made use of, as may be found necessary; the application of heat to the body, saline subcutaneous injections, and morphine, and small doses of calomel for the diarrhœa.—E. B. Fullerton, M. D., in *New York Medical Journal.*

Ipecacuanha in Alcoholism.

Dr. W. F. Waugh, writing to the *Medical World* says: In treating a man for alcholism I wanted to put something in his whiskey to sicken him, and so gave a little fluid extract of ipecacuanha—about 20 minims. It did not nauseate him, but he went to sleep and slept all night. This seemed curious, as he had previously taken 40 grain doses of chloral and of sulfonal, without inducing sleep. Next day I gave him the same dose, without the whiskey and he slept all day. Following this, for a week, I put him to sleep every night on the ipecacuanha, and he had the best week's sleep he had had for years. I gave him the fluid extract, 10 to 30 minims, in a spoon with no water, and directed him to lie perfectly quiet for five minutes after taking the medicine, in order to avoid nausea and vomiting. This is the way to give ipecacuanha for the grave forms of dysentery. Now if this drug will give sleep in such cases it is of importance, for we know that very often they resist such drugs as opium, chloral and bromides, until such hugh doses have been taken that life is endangered thereby.

Indications for Iron.

Iron is indicated in all anæmias unless they are accompanied by fever or due to some malignant disease. In chlorosis the carbonate, made extemporaneously by combining the sulphate of iron with the carbonate of potassium, should be used.

After fevers there is always more or less anæmia.

The weakness of the muscular system is shown by the acceleration of the pulse, due to cardiac weakness on the slightest exertion, as setting the patient up in bed. Iron combined with restoratives should always be given.

In Bright's disease, the muriate tincture, combined with corrosive sublimate and sweet spirits of nitre, can be given.

In diabetes, iron should be given; constipation should be carefully guarded against. The iron should be given with a laxative.

Nervous exhaustion, accompanied by the accumulation of phosphates and hæmatin in the urine, calls for iron.

In chronic constipation of women; uterine disease, characterized by weakness of the uterus or its supports prolapsus uteri, etc.

Early Signs of Pregnancy.

It has been taught that the diagnosis of pregnancy in the first three months is very

difficult or even impossible. This Dr. Charles P. Noble contradicts in the *Philadelphia Polyclinic* In his experience, careful abdominal palpation will make it out as early as the sixth week or at any time between the sixth and twelfth weeks. The sign, he says, has never failed him in his dispensary work, but almost all of these cases came in to see if pregnancy existed, and as they were illegitimately pregnant it was possibly rather an easy guess. The shape of a virgin uterus is pyriform, while a uterus in which there is an ovum but a few weeks old will have grown sufficiently to cause the body and fundus of the uterus to assume a spherodal shape.

The conditions which he found to simulate pregnancy were hematometra, which is very rare and usually occurs at the time of puberty; and intramural fibroid tumors, which on account of the asymmetrical shape given to the uterus, may be left out of the question. When pregnancy occurs in a uterus where there is already a fibroid or if the uterus be jammed between tumors of the ovary then the diagnosis is very difficult, and when the patient is very stout palpation is not easy. Still, in general, he thinks a pregnancy can be told with certainty in the first twelve weeks and he emphatically makes this statement in view of his large experience.

The Treatment of Warts.

The *Union Medicale* says that when one has to deal with isolated warts, they must be taken off with a scoop; a rather abundant hemorrhage follows, which may be arrested by compression or by cauterization. When warts exists in large numbers, this procedure is no longer applicable, particularly on account of the numerous cicatrices that follow its employment. In these cases the better way is to shrivel the excrescences with nitric acid. The tincture of thuja is also a very efficacious topical application.

In cases of condyloma the small tumors may be dusted with powdered resorcin or salicylic acid; they may also be covered with a plaster containing these substances in the proportion of from ten to twenty per cent. When the face is studded with a large number of these little warts, which often appear suddenly, Dr. Kaposi covers them with a piece of flannel spread with a layer of black soap. This is left on the warts for twenty-four hours and adheres to the skin, gradually becoming detached with the warts.

Another very good application is the following mixture: Flower of sulphur, 20 parts; glycerin, 50 parts; pure concentrated acetic acid, 10 parts. The warts are painted with this mixture for several days without taking off the first layer, and gradually the excrescences dry up and become detatched.

For keratosis of the palms of the hands and the soles of the feet plasters of resorcin and salicylic acid are also efficacious. If the case is one of molluscum like nævus it is better to employ electrolysis. The needle connected with the positive pole is plunged into the tumor, and a current is passed of from one to two milliamperes for about thirty seconds. This operation is repeated at the end of eight and fifteen days. When the nævus is very large, the galvano-cautery is preferable.—*New York Medical Journal.*

Ætiology and Treatment of Cystitis.

The author, M. English, (*Le Semaine Medicale*), had already observed that cystitis is not always of microbic origin, but may be due to chemical irritants or to traumatism. He has recently observed four cases of a new variety described as epidemic cystitis. Two important symptoms among those that characterized the disease were retention of urine and profuse hemorrhage following the use of the catheter.

The influenza has a decided effect upon the urinary organs. Existing disorders are augmented, and in previously healthy subjects urinary symptoms are manifested during the influenza, notably hæmaturia.

Among the causes of cystitis are mentioned disease of the kidneys, ureters, prostate and urethra, chemical modifications of the urine (oxaluria, etc.), and, lastly, affections of the central nervous system, such as tabes, and arteriosclerosis and certain chemical agents.

As to treatment, when of constitutional origin, the diathesis is first to be combated. The local treatment depends upon the condition of the mucus membrane of the bladder. Catarrhal cystitis is best without local treatment. Purulent cystitis always demands local treatment. Lavage of the bladder is very important in carcinomatous and tubercular cystitis. Solutions of boric acid are ordinarily to be used; the use of nitrate of silver frequently causes severe inflammation.

Scarlatina and Measles Coexisting in the same Person.

On June 29th last I saw a boy of nine who had sickened and complained of sore throat that morning; next day a scarlatinal rash was undoubted. By July 6th desquamation was distinct on neck, breast, abdomen and thighs. On the 9th he had severe coryza and a constant irritating cough On the 10th I found him covered over with a most intense eruption to measles. Desquamation, as if accelerated by the second skin attack, proceeded with unusal rapadity. I was not able to trace the source of infection, but it is noteworthy that the two poisons must have found a lodgment in the child at much the same time. The boy made an excellent recovery.—*James Ferguson, M.B., C.M., in British Medical Journal.*

Nutmeg Poisoning.

Nutmeg is seldom used in medicine except as a flavor, but as a household spice it has long been helpful in flatuency. Cases of poisoning from its use are not common and for this reason the one reported by Dr. Alexander L. Hodgdon, in the *American Medico-Surgical Bulletin*, is of interest. The patient ate four nutmegs within a few hours and went into a state of alarming collapse. By the use of heat and such cardiac stimulants as caffein, digitalis, nitroglycerine, etc., all evil effects were removed and the case recovered.

Strontium Bromide in Gastritis.

An Italian physician says that strontium bromide is particularly valuable in gastric affections, especially acute catarrh, which, he says, shows anew the remarkable favorable action of the drug. Carseli uses a syrup by dissolving

Strontium bromide.....	gr. xxx.
Syr. bitter orange peel.....	fl. ʒj.
Distilled lettuce water	fl. ʒiijss.

This amount is to be taken daily in three doses, during and after meals. It stops the vomiting and lessens pain. It is thought to act both directly upon the nervous system and as an antiseptic, arresting fermentation and thereby reduciug the flatulent distention that gives rise to the pain.

SURGERY.

Caution to Anesthetizers.

During a recent clinic by Prof. Hunter McGuire in the new amphitheatre of the College of Physicians and Surgeons, Richmond, Va., while chloroform was being administered to a patient on whom excision of portions of the bones of the leg was about to be performed; the patient suddenly stopped breathing, the face became purple, while the heart continued to beat. In a moment Dr. McGuire recognized that the condition was due to the dropping back of the tongue, obstructing breathing. With thumbs behind the rami of the inferior maxilla, he pushed the bone forward, thus lifting up the tongue, and the patient at once began breathing easily, and was kept thoroughly under the anesthetic for the time necessary for the operation. While this procedure is not, by any means, a new one, it is worth while to record such incidents so as to keep the surgeon or physician well on his guard so as to act the moment when bystanders are dazed at the shock of an impending accidental death. In short, in using an anesthetic keep your wits about you and look out for the sudden emergencies. —*Virginia Medical Monthly.*

The Danger of Anesthetizing Diabetics.

The danger of narcotizing diabetics is not as generally known as it should be. As many as twelve fatal cases have been recently recorded. Even in slight cases of diabetes, patients are apt to become comatose and die. Not immediately, but several hours after the chloroform narcosis has passed off. They become indifferent, stupid and confused. Finally lose consciousness, pass into coma and die.—*Charlotte Med. Jour.*

Two Cases of Intraperitoneal Rupture of the Bladder.

Coats records (*British Medical Journal*) two fatal cases of rupture of the urinary bladder, and adds the post-mortem records. In studying these cases the following points seemed especially worthy of comment:

The absence of a clinical diagnosis in both. There was no clear history of violence in either case, and the symptoms were obscured by the fact that one patient was maniacal and the other deeply intoxicated.

The seat and size of the rupture were similar in the two cases. The tear was found in the posterior wall of the bladder, a short distance from the fundus, being circular in the first case and transverse in the second.

The interval of time between the rupture and the death of the patient was in the first instance five days, and two to three days in the last. Of 85 cases collected by Rivington, 8 died within twenty-four hours; 15, within two days; 15, within three days; 16, within four days; 10, within five days; 4, within six days; 5, within seven days; 5, within eight days; 1, within nine days, whilst 1 lived twelve days; 1, more than twelve days; 1, fourteen days; 2, about fifteen days; and 1, sixteen clear days.

The absence of peritonitis was a surprise to the author, who states that none of the ordinary evidences of acute peritonitis were present.

Absence of inflammatory reaction in the wound was noted, particularly in the first case, even in the microscopic examination of the edge of the wound and adjacent bladder wall. Ferraton, in 1883, recorded two cases that received external wounds simultaneously with rupture of the bladder; he observed that at the time of death the wounds presented exactly the same aspect as at the time of admission to the hospital—"they presented no trace of a process of inflammation and repair."

The mode of death is directly related, in the opinion of the author, to the absorption of the urine by the peritoneum, and its continuous accumulation in the blood, to which condition Coats applies the term "urinary poisoning."

NEWS AND MISCELLANY.

The Rules and Regulations that will Govern the Division of Pathology Bacteriology and Disinfection of the Board of Health of Philadelphia.

The Sanitary Committee of the Board of Health submitted to the latter body at its meeting to-day a series of rules and regulations that will govern the recently organized division of Pathology, Bacteriology and Disinfection, of which Dr. B. Meade Bolton was recently appointed the Chief Bacteriologist. The rules and regulations which were adopted are as follows:

There shall be organized a Division of Pathology, Bacteriology and Disinfection, to be called the "Division of Pathology, Bacteriology and Disinfection of the Board of Health." There shall also be organized and established, in connection with the above-named Division, a laboratory for bacterio-

logical investigation and experimental research on questions pertaining to public health and hygiene. The Division of Pathology, Bacteriology, etc., shall be in charge of a chief, who shall be a physician, and an expert in bacteriology and well versed in pathology and the methods of investigation. He shall be called the "Chief of the Division of Pathology, Bacteriology and Disinfection" and "Director of the Laboratory of Hygiene" of the Board of Health.

He shall have an office in City Hall in connection with the office of the Board of Health. The laboratory shall be located in City Hall, where the best facilities for conducting the entire experimental work of the Division shall be provided.

The chief shall be held responsible to the Board of Health for the reliability of the work of his assistants and the proper use and custody of the property connected with the Division, and for the active, progressive and efficient work of the office.

He shall, so soon as appointed, prepare a plan for the establishment of the laboratory, and furnish an outline of the work to be undertaken, and draft rules and regulations for the government of this work, to be submitted for the approval of the Board of Health.

The scope of the work imposed under this new division shall be extended, so far as practicable, to all questions which affect the public health, relating both to preventive and curative medicine; the latter, so far as it includes the preparation of means for the prevention and curtailment of diseases by such processes as vaccination, the preparation and directions for the use of such material as the anti-toxin of diphtheria and sterilized serum of rabies, etc., etc.

There shall be two assistant bacteriologists, one clerk (who shall be a stenographer), one helper, one messenger, and three collectors of culture tubes.

So soon as practicable after the establishment of the laboratory, steps shall be taken to prepare, in ample quantity for the use of the city, the anti-toxin of diphtheria after Behring's or Roux's method.

Steps shall also be taken at once for the prompt examination of all specimens of exudate from throats of "suspected" cases of diphtheria and report thereon, the proper announcement being made to physicians of the facilities afforded by making prompt and reliable tests and the means of taking advantage of them.

The Chief of the Division of Pathology, Bacteriology, etc., shall report regularly to the Board of Health upon the work of his division, and as the work more particularly concerns measures for the management and suppressions of contagious and infectious diseases, he shall be in close communication with the Sanitary Committee of the Board of Health, and subject to their direction and control.

The laboratory shall be provided with a telephone to facilitate communication.

The Chief shall keep himself in constant communication with the medical inspector so as to place at his disposal all information that will be of practical aid in the successful management of the Division of Contagious and Infectious Diseases, especially such information as has a bearing upon the duration of the period of isolation and of quarantine, and the time for disinfection as determined by bacteriological examination.

The chief shall prepare, for the purpose of making bacteriological diagnosis in suspected cases of diphtheria, the necessary culture outfits and printed for distribution to stations at convenient points throughout the city. A list of these stations shall be published, at which physicians can obtain the outfits free of cost. The culture-tubes shall be collected once a day, or oftener if deemed advisable by the chief. When cultures are not made by the attending physician, they should be made by the assistant medical inspector, when no objection is raised by the attending physician. A report in all cases should be made as soon as practicable to the attending physician of the results of the bacteriological test, either by mail or telephone.

Diagnostic tests shall also be made for physicians who desire it in all cases of suspected tuberculosis whenever specimens of the expectoration are left at the station or sent direct to the laboratory.

The chief shall prepare printed forms to be filled out by physicians, and to be filled out in reporting to physicians the results of the cultures, and such other forms as may be used in the office.

The chief shall make requisition upon printed form to the Sanitary Committee for all the supplies needed. He shall mark as correct all bills that meet his approval.

The chief of the Division of Pathology, Bacteriology, etc., shall advise from time to time the best means of increasing the efficiency of the work of the disinfecting corps, and shall arrange for a practical course of instruction on "Disinfectants and Their Uses," to be given to the members of the corps.

The work of the Laboratory of Hygiene and of the Chemical Laboratory shall be cooperative in furthering the chief purpose of their organization.

The Laboratory shall be kept open from 9 A.M. to 6 P.M.; and, as the interruption of the work of making diagnostic tests may jeopardize life, provision shall be made for the continuous and uninterrupted prosecution of this special branch of investigation.

The Assistant Bacteriologist shall be under the special supervision of the Chief, and shall be responsible to him for the faithful and efficient performance of the duties assigned to them.

The object of the establishment of the Laboratomy of Hygiene is not merely the application of knowledge for the benefit of the community. The purpose of its establishment is also the utilization of accumulated data by drawing deductions therefrom, experimental research in the field of the etiology of disease, and the study and investigation of all subjects related to preventive and curative medicine so far as they appropriately come within the scope of such an institution.

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ORIGINAL ARTICLES.

THE EDUCATION OF MEDICAL MEN. HOW AND WHEN?

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Let me admit at the outset that this question, though for some time in mind, would probably not have taken the form of a journal article, had it not been for the series of editorials entitled "An Overcrowded Profession," which have recently appeared in THE REPORTER.

There is an old puzzle that relates that the captain of a ship, being short of provisions, found it necessary to diminish his crew which was composed of white men and negroes. He, therefore, proposed to range the men in line and throw overboard every tenth man, counting back and forth along the line. The proposition seemed a fair one but the captain managed to arrange the sailors so that only the negroes went overboard. A very similar problem lies before our profession, and the solution is, theoretically, easy enough.

But, leaving aside the economic aspect of the question, let us consider how those intending to enter our profession can be best educated. If I speak of my own observations in this matter, it is not on account of egoism, but because one can deal better with personal experience than with general statistics. In the last ten years, the usual course of medical study has been advanced from a two-year to a three-year standard, and there is every prospect that, within the next year, another year will be added. This is a tremendous improvement, but it must be remembered that probably a majority of the men who inaugurated this reform and who are given the best medical instruction, are practicing under diplomas conferred after two short sessions. Moreover, however long a student may stay in a medical college, and however fortunate he may be in his hospital service, he still will go out into practice inexperienced, while his rank in the profession after five, ten or twenty years will depend, not on what he has learned at college, but on his subsequent work. The best course of study preliminary to graduation, therefore, is not necessarily that which sends out the best informed doctors, but that which has best equipped its students to continue their studies. The best physician is the one who has the greatest ability to comprehend general principles and to adapt them to individual cases. Such a man must have a broad training. He must understand many chemical and physical principles which are not included in the medical course. He must be able to meet his patients and representative men of other professions on a par. He must be able to express himself correctly and to

know the ultimate meaning of the words he uses. In short, he must have a good general education. If the lengthening of medical courses shall tend to dissuade students from taking proper preparatory training, it would be better to take a step backward, for a well educated man with two years' drill in purely medical subjects is better able to cope with the problems that will confront him in after life than the boy who supplements the spelling book and reader with four, five, or even six years in the narrow rut of professional study.

As a student the writer attended a college in which three years of study were required, of which the first might be with a preceptor. Comparing for several years the men who chose respectively two and three-year college courses, there is certainly no marked superiority on the part of the latter, in fact, judging both from work before graduation, and from apparent success afterward, the writer is inclined to think that the balance is in favor of the two-year men, although their study with a perceptor was largely a matter of imagination. The reason was this, that the two-year men were as a rule ambitious and, having a better preliminary education, were allowed to stretch the strict construction of the law in regard to their study under a perceptor while a man not so well prepared would be advised to take the slower course.

The writer had an experience with the beginning of the four-year course that was not very favorable. Some time after graduation he went to a large college for a post-graduate year, expecting to enter the fourth year class. But as then organized, this consisted mainly of a miscellaneous collection of specialties. Nervous diseases, dermatology, eye and ear, throat and nose, gynecology, with the clinics and some of the lectures of the ordinary senior course, made up this remarkable assortment. Now, granted that a man wished to take the fourth year course with some one specialty in mind—which was not true of a single member of the class of that year—he would scarcely want to devote himself to so many others and, in the case of only one specialty, was the work so planned that it would include more than the merest rudiments. However, it would be manifestly unfair to judge the present standard of fourth-year work by this experimental beginning. But this point must be thoroughly understood, that no amount of purely technical training will atone for the lack of preliminary education, and that a four-year or five-year course in medicine, plus a previously uneducated student, will simply produce an artisan, not a professional man.

The man who has studied medicine, as he would learn a trade, is not fitted to take a broad view of life nor to combine properly the horse sense, tact, sound logic and actual remembrance of facts as the truly successful physician must. Certain exceptions exist that prove the rule. There is the ignorant man that makes a financial success of medicine and the cultivated one that, somehow, lacks the element of practicability. There is the man who absorbs education and refinement from the atmosphere, apparently, and the one whom no amount of literary and scientific training can change from the raw, uncouth, ignorant fellow that he was at the beginning. I am speaking, however, of the plain, every-day man who becomes what his environment makes him.

The determination of the exact amount of preliminary education to be required of the medical student, is a matter of considerable delicacy. Probably if a circular-letter could be sent to the members of the profession asking their reply to such a question, the answer would in general correspond quite closely to actual attainments of those addressed. After a great deal of political opposition, the profession of New York has succeeded in having a bill passed requiring an ordinary grammar school education as a minimum for the prospective medical student. On the other hand, one or two medical schools are seriously considering the question of requiring a bachelor's degree for admission. We must acknowledge that even the New York law has produced a decided improvement in the average ability of medical classes, though it is a disgrace to our profession that such an admission is necessary. For the present, of course, the requirement of a bachelor's degree or, for that matter the requirement of six fingers and toes, would work no harm to the profession and the laity as a whole. However, the rights of medical schools and of those who desire to adopt the profession of medicine, must be considered, and it seems to the writer that under existing

circumstances, the requirement of a collegiate education is rather unreasonable, although there can be no objection to its adoption by a few schools. A fair compromise between the two extremes would consist in the establishment of a high school education as the standard. Such an education can be obtained in every city and in nearly every village of the country at no expense beyond that of living and the cost of a few books.

Admission to medical schools should depend upon the permission of an absolutely impartial board of examiners, not connected in any way with medical institutions. Such boards could be easily organized from academic teachers and superintendents of education and they would have the practical knowledge that would render possible the formulation of rules to determine the acceptibility of the diploma of any given high school or academy and to examine candidates who had no diploma but who claimed an equivalent training.

With the general adoption of some such provision, either by legislation or by the concurrent action of respectable medical schools, there would arise a demand for preparatory medical instruction which has been anticipated by one or two colleges and which would justify the establishment of special courses in most of the prominent academies and colleges. Such courses would lighten the labors of medical teachers and would allow them to presuppose some degree of familiarity with physiology, chemistry, etc., and thus elevate the character of instruction in these branches in the professional school.

By checking the current of candidates at the entrance to the medical school instead of at the end of the course, much dissatisfaction could be done away with and the diminution of the number of students would be more effectually accomplished. Students have a very natural feeling that, having been allowed to matriculate and having paid for their medical instruction, they have in a measure paid for their diploma in advance. At the final examinations it is almost inevitable that one or two students pass whose success is a surprise to themselves while one or two others who are really better men, fail. Some students seem to regard the matter as a lottery. They argue that the expense is not high, and only two or three winters are taken up while their business or leisure need not suffer during the rest of the year. Without any special effort, they attend most of the lectures and clinics, gain a smattering of the subjects taught and take the examination with the consciousness that they have everything to win and comparatively little to lose. Other students take up medicine, not from any love or fitness for the subject, but because they would rather "doctor" than pitch hay, cut hair or drive a street car, and because, under existing circumstances, less is required of the physician in the way of preliminary training than of any other professional man. Now, there is no disgrace in any honest work, but manual labor, by common consent, is considered less desirable and is compensated at a less rate than are the professions. Hence, it is no affectation to consider medicine an occupation of higher grade than those mentioned and any young man ought to be encouraged to better himself, providing he does so honestly, in other words, if he will fit himself intellectually for what he wishes to undertake.

But, at the end of proper preparatory study, the hay pitcher, the barber and the driver are no longer choosing between staying where they are and taking up a medical career. If they are so inclined, a more comfortable and nearly or quite as profitable a profession lies before them as teachers or ministers. Opportunities in business, law, journalism, politics and a host of other fields open before them which were previously not even dreamed of. What will be the outcome? Medicine will be chosen only by those who have some particular liking for it and we shall have eliminated that class of medical students who feel that if they can only graduate, they cannot have so poor success as to make them worse off than they are at present. Thus, it seems to the writer that the insistence on proper preliminary education will not only accomplish a greater reform than any degree of increased medical study but that the economic question raised in the series of editorials already referred to, will be satisfactorily settled. The writer does not wish to be understood as condemning the effort to increase the instruction in medical colleges. But let the reform begin at the foundation, before any radical change is made in the superstructure.

APPENDICITIS.

M. PRICE, M.D., PHILADELPHIA, PA.

The trouble is often, if not very generally, looked upon by physicians and surgeons from radically different standpoints and not with that cautious and experienced judgment which the exigencies of the case and the welfare of the patient in many instances demands. The surgeon operates upon many cases not requiring such radical treatment, removing healthy appendices when the real trouble was impacted bowel—removable by some simple laxative. The physician on the other hand often claims cures for a condition that never existed; he treats impacted bowel or other local trouble medically and through mistakes of symptoms, or through some not over worthy professional motive, claims a cure for appendicitis.

It must be granted that the condition is not infrequently attended with obscurities that perplex the most experienced physician, and put to severe test the best surgical judgment.

It has been within the experience of all physicians of extensive general practice to find in a number of cases a condition existing in the right iliac-fossa, a condition so closely simulating appendicitic abscess as to require the skill and experience of one thoroughly familiar with such conditions, and of sound, enlightened surgical judgment to differentiate an appendicitic condition from one closely simulating it. There are a few symptoms in this condition that go to clear up the diagnosis. Where appendicitis exists there is always great tenderness in the right iliac-fossa—with but slight or no induration, with a temperature sub-normal the patient continues to grow worse, and as the case goes on you find induration increasing and a mass in the right iliac-fossa augmenting in size, the sub-normal temperature continuing you have little or no reason to doubt that you have an appendicitic abscess or an abscess at the head of the colon requiring surgical treatment, whether one or the other. We will not maintain that all cases of appendicitis present such low temperature, but that it is an exception for them to suffer from high temperature—the rule is a low or sub-normal temperature. And in all genuine cases a well marked abscess exists.

In the great number of cases we are called upon to treat surgically—the operative cases—we find, with but rare exceptions, a sub-normal temperature, running as low as ninety-six in some cases, and an abscess is found in every case, and the necessity for the removal of the appendix in about one-tenth of the cases.

Drainage being about all that is necessary in the greater number of cases. The condition is usually found to have existed from about two to six days. Those not operated upon may be, and very frequently are, those with a temperature ranging from one hundred and one to one hundred and three with constipation and with no indication of sepsis. These cases in the experience of most successful practitioners and surgeons, in proportion to those operated on, are about as ten to one. Clearly the cause of the trouble in largely the greater number of cases is a foreign body at the head of the colon—either undigested food, nuts, seeds or some undigested substance taken in as, or with food.

In these cases the symptoms do not abate until the foreign body has been dislodged from its position and purged away. It is frequent that the treatment of these cases extends through such a length of time as to preclude all idea of abscess of the appendix, for such a condition would early have proven fatal unless relieved by surgical treatment.

Nature in some of these cases anticipates the surgeon and kindly comes to the relief of the patient. We meet with cases of genuine appendicitic abscess where the contents have been emptied through the vagina, in exceptional cases through the bladder, and in many instances through the head of the colon. In a number of cases operated upon there is found in the head of the colon a number of openings so much diseased that fæces pour out through the external wound for a number of days after the operation. About all these cases,

where the surgery is timely, carefully and skillfully done, recover. The deaths from appendicitis usually occur in those cases where a diagnosis has not been made, where a genuine peritonitis existed when the patient was first seen, where opium had been used in large doses and the patient septic beyond help.

No one doubts that in the hands of experienced and competent men the diagnosis can and should be correctly made.

But the credulity of the profession is severely taxed by the many reports in medical journals of long lists of consecutive cures of appendicitis in cases where the temperature was 101° and 102°. Are we not justified by the experiences of many eminent physicians in concluding that a mass of fæces in the right iliac-fossa has been mistaken for pus. And we cannot fail to be further convinced when we see a hundred or more operative cases reported, and that of these from fifty to seventy-five per cent. were without adhesions, that the surgeon has been wantonly invading the domain of the general practitioner. Sometimes we hear this operation justified in cases where by no process of pathological reasoning can it be justified, repeatedly, there is set up the flimsy, absurd claim that if he has not got it now he will have it and further that the condition is such as furnishes a playground for dangerous microbes.

To these microbe apostles can be applied that fine touch of ridicule with which Dr. Conan Doyle in his "Round the Red Lamp," credits the good old Dr. Winter. "Shut the door or the germs will be getting in," and from the statistics of the cures claimed we would infer that the claimants possess all the skill and magic of the good Dr. Winter. "He would shoo death out of the room as though he were an intrusive hen."

In 1893 I saw a boy with Dr. Weaver, 63rd and Woodland avenue, who was supposed to be suffering from appendicitis. His little sister had died one year previous, a post-mortem revealing in her case an appendicitic abscess. We saw the boy on Monday, found him with the following symptoms: temperature, 103°; pulse, 130; skin, dry and harsh; a well marked tumor in the right iliac-fossa, which was present on Sunday afternoon when Dr. Weaver made his first visit. The boy was suffering great pain, with both extremities drawn up. He complained of great pain during the examination. He was 13 years old and much overgrown for his age. On the previous Saturday he had been slightly injured in the right groin by a fall on the railroad. He complained of this pain until Sunday morning, when he was offered a ride on horseback which he took without complaint for a number of miles. In the afternoon of that day (Sunday) he complained of great pain in the right iliac-fossa, and Dr. Weaver was sent for and found him with symptoms as detailed above. Believing that he had a case of appendicitis to deal with, and sharing my own faith in free purgation in such cases, he proceeded to give him salines in large and repeated doses. When I made my first visit on Monday I found the boy purging but with no relief to the severe symptoms named.

In talking over the case with Dr. Weaver we concluded that it was not a case of appendicitis for the reason of the existence of the following group of symptoms: that the tumor was present from the very beginning of his attack, did not advance in size, high temperature and quick pulse also existed from the start, his appearance and skin did not indicate the formation of pus, no symptoms of septic involvement present. The purging treatment was continued with the understanding that if the boy's condition was not better by the next day I should be telegraphed for. At noon next day (Tuesday) the boy's condition was considered worse by the family and the doctor—this was 12 noon—then the temperature was 103½°; pulse, weak, from 135-140, and suffering intense pain. At 2.30 P.M. I arrived at the house and found the boy sitting on the side of the bed free from pain, all his symptoms relieved; he had passed from the bowel almost a chamberful of partially digested food. The injury the previous Saturday may have paralyzed to a degree the head of the colon, and greatly aggravated his symptoms. This is not an exceptional case, it is simply one of a very large number of cases which are classed and treated as appendicitis, and claimed as cured of appendicitis by medical treatment.

A careful study of the cases reported as appendicitis and as cured by medication, will convince every experienced and skilled practitioner, whether of surgery or

general medicine, that few of them bear the distinctive marks of genuine appendicitis.

We find the following report of cases in the proceedings of the Philadelphia County Medical Society, 1891, Vol. XII, pages 395–397, reported under the caption, "The Medical Treatment of Appendicitis, with a Report of Five Cases ending in Recovery."

The case of Mr. M. K., who is a prominent and very active literary man in this city, dates from March 24, 1889.

The patient gave me a very intelligent history of his case, which was that there had been a gradual decrease in the evacuations for several weeks, with a great deal of distention and discomfort of the abdomen, and finally obstinate constipation followed. When I first saw him there had been no movement for several days.

He had a tumor and localized pain in the right iliac-fossa. Temperature 103½°, pulse 120, coated tongue, etc.

He was given a hypodermic of morphine and atropine for the pain, which gradually spread over the abdomen as the gas accumulated. Two large doses of castor oil and turpentine were taken without any action. He took calomel, soda and ipecac powders for twelve hours, followed by Hunyadi water, but still there was no movement of the bowels. We then resorted to the enemata of turpentine, laudanum, castor oil, Epsom salts, and hot water given in the knee chest position. These moved the bowels freely and relieved the pain and distention. Turpentine stupes were also used freely.

There was a double inguinal hernia in this case, and to satisfy ourselves that there was no strangulation of the gut, Dr. W. W. Keen was called in consultation, and pronounced the case free from any such complication and confirmed the diagnosis of appendicitis. He suggested pills of colocynth comp. and opium.

The patient made a good recovery and for several weeks took pills of aloin, strychnine, belladonna, cascara and physostigma to relieve the atonic condition of the bowel, and an occasional dose of Hunyadi as he was rather stout and full-blooded.

In July, four months later, this same patient had a recurrence of the trouble while at the seashore, which began, possibly, with a slight tendency to constipation early, but the first the patient complained of was a severe serous diarrhœa with high temperature—104°, pulse 128 (normal 58). Severe pain in the ileo-cæcal region. This attack began before I took up my summer practice at Cape May Point, and Dr. F. E. Stewart, of Wilmington, was called in.

He made a diagnosis of cólliquative diarrhœa, and gave acetate of copper and morphine to check it, and aconite for the fever, but nothing seemed to have any permanent control over the bowels.

Right here in this case, which was my first patient, but his second attack of appendicitis, I learned a very valuable lesson. Here was an obstructed bowel, and nature was trying, by pouring out a very excessive liquid secretion, to flush out the obstruction or foreign matter.

I simply took the cue from nature, and with small, frequently repeated doses of calomel, ipecac and soda, followed by salines accomplished the object, and in less than six hours had the satisfaction of seeing the tumor, which had been in the region of the cæcum, deposited in a commode, which the black, very offensive mass nearly filled. In this attack we used hypodermic injections of morphine for pain and pilocarpine for the high fever and dry skin and tendency to cerebral congestion, as the kidneys were not acting at all freely. There was no vomiting after the first hypodermic, and the patient began at once to take iced champagne and apollinaris, and soon was able to take milk and other liquid food.

In this case no resort was had to rectal enemata, as the bowels were thoroughly cleared out within six hours after the time I first saw the patient, and in three or four days he was attending to his regular business. He took aperient, tonic pills for several months and was requested to use Hunyadi water freely, and rectal injections if the symptoms occurred again. He has had no recurrent attacks and no constipation since.

In the case of Miss S. there were pain and tenderness over the abdomen, which as the case developed, became marked in or over the right iliac-fossa. Instead of dorsal decubitus, the patient sat in a chair with her thighs flexed on the abdomen, and could not lie down until relieved by treatment. There was fever; temperature

102°. There was constipation, nausea, and if I remember correctly, some vomiting, but the latter was not a marked symptom of the case. I did not discover a tumor on abdominal palpitation or vaginal touch, but Dr. David Stewart, who saw the case with me on the second day called my attention to what appeared to be a doughy mass on the right side of the body, on examination per rectum. I must confess that I would not have discovered said mass except my attention had been called particularly to it or in other words I might have had a suspicion of its existence, but it required a finger of more education than mine in feeling for tumors of this nature to make a positive diagnosis.

The treatment suggested consisted of hot turpentine stupes, opium and iodide of mercury; under this she seemed to improve.

From the beginning I recognized the gravity of the case. I advised her to go to the city at once as proper nursing was out of the question situated as she was at the Point. Furthermore, I told her if she got worse an operation might become necessary, and then it would be too late to remove her.

I first saw the case Monday, August 31st, at 6.30 P. M., and found her extremely weak and nervous from the trip from Cape May Point. The temperature was 103½°, pulse 120, abdomen tense, tympanitic, and extremely sensitive. I found a large tumor in the region of the ileo-cæcal valve, intense pain and nausea. There was extreme tenderness over the tumor and abdomen generally, indicating a good deal of general peritonitis. Miss S. was brought to the city by her sister-in-law, and they went into a house where the furniture had just been piled in. There was not even a bed up or any convenience for heating water, so in regard to nursing and environment she did not improve her condition. When I arrived she was on a bed that had been hastily put up.

The sister-in-law, who acted as nurse, got hot water for stupe and enema and the patient had the same treatment, practically, as the boy—the first case reported—except that I entrusted the giving of enemata to the nurse, who proved very intelligent and efficient.

When I called next morning I found the bowels had moved freely several times and, though the patient had had a restless night, she had slept some. The pain and distention were nearly gone and the temperature had fallen to 101°. By Wednesday, September 2d, the temperature was normal and the pain was entirely gone. She began sitting up Wednesday, without my knowledge, and the next Wednesday she went back to the Point. I believe she had a slight recurrence of the pain, inflammation and constipation the week after she got home, but they were controlled by injections, stupes and opium suppositories.

She has enjoyed good health since.

Comment upon these cases is entirely unnecessary. The profession is eminently competent to determine whether or not they were cases of appendicitis.

Antipyrin as a Vesical Analgesic.

Vigneron (*Annales des Maladies des Organes Genito-Urinaries,*) is convinced from its employment in three cases that antipyrin will prove to be a valuable vesical analgesic. Injected into the bladder the remedy is free from harmful effects, even when employed over a protracted period. As an antiseptic the author believes it to be superior to solutions of boric acid. When the solution of antipyrin is allowed to remain in the bladder, it not only relieves the pain but checks spasmodic contractions. A 4 per cent. solution left in the bladder for ten minutes is sufficient to diminish the pain attending subsequent washing or instillation. Antipyrin may be employed in all cases of cystitis in which local treatment induces pain. When the bladder is not distended, two and a half to five drachms of a 4 per cent. solution, left in the bladder for ten minutes, is sufficient. When the bladder is much distended, fifteen to thirty drachms of a 1 or ½ per cent. solution should be injected and allowed to remain in the bladder.

Cocaine as a Means of Stopping the Secretion of Milk.

Dr. Casoli reports several cases in which it was desirable to stop the secretion of milk, on account of the death of the child or for other reasons. To accomplish this he painted the breasts with a five per cent. hydrochlorate of cocaine solution, made with equal parts of water and glycerine. The secretion of milk diminished after the first application, and by the sixth day had ceased altogether.

THE PNEUMATIC CABINET AND ITS THERAPEUTIC USE.*

CHARLES HERWIRSCH PH. M. M.D., PHILA.†

The pneumatic cabinet is an air-tight chamber composed of iron, steel and glass; about 5 feet high, 2 feet wide, 2 feet deep at the top and 3 at the bottom, and large enough for one person to sit in. The front of the upper half is provided with a heavy plate glass window, through which the patient can be seen, in the center of which is a hard rubber breathing faucet, to which a soft rubber tube can be attached, through which the patient may breathe, and medicated sprays may be introduced. On one side there is a mercurial gauge to regulate the degree of rarefaction within the cabinet; and on the other side there is a water gauge to indicate the extent of the respiratory movements as they affect the pressure of air within the cabinet. Ingress and egress is by a heavy air-tight iron door. There is a pair of bellows on the top, which are worked by a lever, and a tube with a valve leading into the cabinet for the purpose of pumping the air out, and to regulate the air pressure within.

When the patient is within the cabinet the air becomes rarefied and the air in the bronchioles and alveoli necessarily expands and is discharged into the larger tubes where there is the least resistance. At the same time the reduced pressure on the pulmonary vessels diminishes their tension, and a free flow of blood from the right heart to the lung and from the left heart to the cutaneous vessels is the result, and the work of the heart is temporarily diminished. (Dr. Von Ruck.) Then the faucet is opened and the heavier air from the outside is allowed to enter. The patient, having the breathing tube in his mouth, is compelled to take a deep, full inspiration, at the same time the bellows are set in motion and the air pumped from the cabinet, or, in other words, rarefied. Now the circulation in the lungs is under the tension of ordinary air-pressure and the necessary result is its depletion. The blood is discharged toward the left heart, whence the left ventricle can easily throw its contents into the circulation with diminished effort. The pumping out of the air from the cabinet rarefies it and the air pressure on the body is diminished; while the heavier air entering from the outside through the breathing tube, is inhaled by the patient, and as the resistance from without is not so great, the inhaled air forces itself into every available space of the lung.

Sanderson says, that the inhalation of compressed air lessens the respiratory movements and number of heart beats, and increases the arterial tension. The effect of this change in the condition of the circulation is to diminish the amount of blood in the veins and auricles, and to relatively increase it in the ventricles. Liebig says, compressed air does not appear to influence materially the production of carbonic air, but it does the absorption of oxygen. Medicated sprays may be introduced and the patient made to inhale them.

From what has been advanced the following has been deducted: The collapsed air cells will be inflated and restored to their normal size and capacity; the blood will be better aërated as more oxygen enters the circulation and, therefore, the nutrition increased; and as the inhalation of compressed air sets the respiratory muscles in motion they must be strengthened. As the smaller and larger tubes are temporarily dilated and the exit of the enclosed air forces the secretions into the larger tubes, expectoration or expulsion of the secretions is at the same time favored. It also follows that the heart muscles are strengthened.

As far back as 1835, experiments have been made with condensed and rarefied air; and again in 1850 and 1857, experiments by this method were made by Tabarie, Bertin, Montpellier and others, by placing patients in reservoirs of compressed or rarefied air. Hauke, of Vienna, made the first portable apparatus, and after him Waldenburg. Since 1885, the

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pneumatic cabinet as above described has been, with few alterations, in use and recommended by men like Dr. H. F. Williams, B. F. Westbrook, Sidney A. Fox, J. T. Whittaken, Carl Von Ruck and others.

For a long time it has been recognized that a high altitude and the breathing of rarefied air is beneficial to consumptives; but, as Dr. Osler says, the rarefaction of air in high altitudes is of benefit in increasing the respiratory movements in pulmonary disease, but brings about in time a condition of dilatation of the air vesicles and a permanent increase in the size of the chest, which is a marked disadvantage when such persons subsequently attempt to reside at the sea level. Now as the patient using the pneumatic cabinet is not compelled to breathe the rarefied or compressed air constantly, but only for a short time, say from ten to thirty minutes each day, and only so long as he derives benefit from it, the danger of permanent dilatation of the air vesicles is avoided.

In phthisis the cabinet is of great value if the disease has not gone too far, but when the lungs have begun to soften and cavities are formed, the cabinet will do no good. I am always guided by the clinical thermometer. If the temperature is not more than 100° F., I allow the patient to remain ten to fifteen minutes in the cabinet every other day, and take his temperature again fifteen minutes after he comes from the cabinet. If there is no rise in the temperature, I put him in the cabinet again on the second day; but should there be an elevation, I try to reduce it by drugs until the fever is brought under control, and then try him again. With medicated sprays I have no experience, but I have seen them highly recommended by different writers. I do not believe it possible, as some of them claim, that a cure can be accomplished by local antiseptic treatment. Benefit can only be derived from the better oxygenation of the blood, the expansion of the whole chest, the strengthening of the heart and the respiratory muscles.

In pleurisy after aspiration, or in dry pleurisy, the cabinet is of undoubted value as it produces complete distension of the lungs and oxygenation of the blood. I have seen cases of pleurisy improve very much under this treatment. In chronic asthma the cabinet will improve the condition wonderfully, but must be continued for a long time. In emphysema compressed air treatment is the only thing from which we can expect any beneficial and permanen tresult. According to Bartholow, "in this condition the object of compressed air is to relieve the breathing by supplying more oxygen and it affects an equalization of the blood in the two systems of redistributing its pressure by retarding the breathing and the action of the heart, the contractions are firmer and the cavities are better emptied. The pressure is transferred from the venous to the arterial system and while the blood on the right side is diminished, on the left it is increased." In chronic bronchitis the cabinet is of very great help to the patient, as it dilates the bronchioles and helps to expel their secretions into the larger tubes, from whence they can be more easily expectorated; and it will, in a comparatively short time, in most cases, cure the patient.

It must not be supposed that when using the cabinet all other medication is omitted; on the contrary judicious medical and hygienic treatment, with the use of the cabinet, must be continued if permanent results are to be expected; and in many cases the result will be improved appetite, increased weight, and reduction of fever.

I will review a few cases in which the cabinet has been used, and the patients have been benefitted by its use.

Mrs. L. G., thirty years of age, native of Ireland, five years in this country, came to me February 21, 1894. Physical examination showed impaired percursion, resonance in left apex extending to third interspace; crepitant râles and roughened inspiration over same area; temperature, 100°; patient very anæmic. The following was given: Arsenious acid gr. $\frac{1}{60}$; strichniæ sulf. gr. $\frac{1}{30}$; ferri reduct., quinine sul. each 1 gr.; in a pill, 4 times a day; codeine gr. $\frac{1}{4}$ for cough as required. She was also allowed to remain in the cabinet 15 minutes every second day. This treatment was continued for two months, only increasing the strichniæ gradually. May 8th, I again examined the patient but could find no râles; percursion was normal; had had no fever since March 19th, and had gained 12 lbs. in weight. I have since been called in to treat her for rheumatism, but she has not complained of any chest trouble.

Mrs. A. W., aged twenty-three, called on me September 24, 1894, with the following symptoms: Physical examination—dullness over left clavicular region extending to fourth interspace; impaired percursion resonance over left scapular region; crepitant, râles over same area; vocal fremitus increased, and roughened inspiration; temperature 100.6°. I gave her strichnine sulph., syr hydrastis acid, syr hypophosphates, phenacetin, 5 grs., at 2 and 7 P.M. On 25th inst., temperature 99.4°. I began with the cabinet and continued this treatment omitting the phenacetin, but using for the cough ext. coco fl., euphorbiæ pill, fl. and codeine, as required, until Nov. 14th, when she reported herself feeling well; temperature normal. On examination I could not hear any râles; dullness had disappeared, but there was still some slight impairment in her left infra-clavicular region. She had gained 4 lbs. in this time.

J. F. L., aged fifteen, a patient in my clinic in the Rush Hospital; first visit Nov. 7, 1894; complaimed of cough every winter for three years with purulent expectoration and coughing spells during the night; dyspnœa and palpitation on slight exertion; appetite poor, symptoms of indigestion. Physical examination, percussion normal, on ascultation sonorous and sibilant, râles over the whole chest; expansion poor. I prescribed strichnine sulf. 1 gr., extr. euphonbiæ fl. ext. coca fl., each five drams; syr. hydriodic acid and syr. hypophosphites, each two oz.; one teaspoonful four times a day and during the night if required; acid mixture after meals. Her weight at this time was 107 pounds. Temp. 99°. Use of cabinet for fifteen minutes every second day. November 19 nocturnal cough had ceased, weight 110½ pounds; continued treatment, increasing the strychnine. December 4, chest examination, negative; no râles heard; gastric catarrh relieved. January 30, 1895, use of the cabinet once a week; no cough; weight 112 pounds.

Miss M. D., eighteen years of age; first visit at Rush Hospital clinic, December 10, 1894; complained of cough since last May; dyspnœa and palpitation on exertion; feverish in the afternoon; night sweats on and off; appetite poor; had not menstruated for sixteen months; very anæmic. Physical examination, dullness in left infraclamcular region; roughened inspiration; temperature 100.2°; weight 91½ pounds. I prescribed a pill of strychnine arsenic, iron, quinine and gentian; phenacetin to reduce temperature. December 19, temperature 99.4°. I put her in the cabinet for ten minutes and continued the above pills, omitting the phenacetin; giving coco and euphorbia for cough. January 25, 1895, she reported much better, dullness had disappeared, temperature remaining at 99°, weight on that date 94½ pounds; appetite better. Is still under treatment.

D. H., aged thirty, colored, and a Mrs. M. J. P., aged forty-six, white, are at the present time under treatment, and as both have a similar history and physical signs, I report only one case. Dry cough, with pain over left side for five or six months; dyspnœa and palpitation on exertion; appetite poor. Over left side friction sounds are heard with impaired vocal primitus and resonsance. Diagnosis: thickening and roughening of pleura on left side with probable adhesions. Both are using the cabinet fifteen minutes every second day, and are taking strychnine and potass. jodi. with good results. In the beginning both patients complained of the pain being very severe after leaving the cabinet, but the pain has since disappeared and both are improving.

In all the above related cases of incipient phthisis, I have made a microscopal examination of the system and have found the bacillus tuberculosis present.

Treatment of Alcoholism by Strychnia Nitrate.

In *Gaillard's Medical Journal*, Breed is quoted as stating, in the *Medical News*, that we have in this drug a remedy that overcomes the desires, with the least effort on the part of the inebriate; a remedy that overcomes the gnawing at the epigastrium, that tones up the nervous system and overcomes mental disturbances, that brings back the appetite, and more than all else, exerting a moral influence upon the patient, supplying that which before was lost, viz., hope, enthusiasm and self-confidence, a bright, youthful expression of the eye, in the stead of the sneaking, apologetic air which is the external badge of moral depravity.

COMMUNICATIONS.

PNEUMONIA.*

DAVID TAGGART, M.D., FRACKVILLE, PA.

When, one year ago, you did me the honor of making me President of this Society, it was with great misgivings as to my ability that I accepted. I relied though on your good nature and trusted that you would be considerate enough to take the will for the deed and overlook many things poorly done, which others might have better done, knowing that my heart would be right if my head was wrong. My administration now passes into history, or that deep, dark, mysterious abyss, "The Archives of the Society;" and, whatever my shortcomings may have been, I can surely make some claim to the spirit of phophecy; for my expectations have been even more than realized, and I now thank you all for the uniform courtesy and consideration with which I have been treated, and for the kindness which has made the task of presiding over your meetings a pleasure.

We can properly congratulate ourselves upon having such a harmonious and pleasant year. Our meetings have all been agreeable and profitable. In this connection I wish to thank the gentlemen who have furnished the papers for the year, as their courtesy in so ably responding to my requests made the matter of supplying mental pabulum very easy for me.

In considering the question of the President's annual address, I am fortunate in the fact that considerable latitude has been allowed in such addresses. I might of course go into an extended résumé of new remedies and new surgical procedures and appliances; but if you don't know as much about the progress of medicine during the past year as I, may the good Lord be merciful and help you and your patients. As for the festive little bacillus which has been the fruitful source of numerous diseases and more numerous papers for the last few years, I must candidly confess to a very slight acquaintance with it personally. Moreover, and it is with a feeling of sadness that I say it, it seems to me that, in spite of laboratory discoveries, in spite of the numerous "antis," warranted to kill the bacillus of this, that, or the other disease, the festive little plant still manages to carry off our patients in nearly the same proportion as years ago, when little or nothing was known about it. Remember now I am speaking only of diseases so-called. When we come to the surgery of the present, contrasted with the surgery of the past, then must we stop and conclude that there is a great deal in the germicidal theories. So let us take hope; rise from our despair; bid the laboratory worker God-speed; and trust that some day we may have the same success with internal antisepsis that has been granted us in the antisepsis of wounds. May that day be nearer than I expect.

I have one course still left open to me, that is to single out one disease and make my few remarks upon that. You will presently be much more ably entertained, so I must make my talk brief. My subject will be "Pneumonia;" not because I know so much about it therapeutically, or expect to present anything new, but for the reason that it is seasonable, and for the further reason that a few years ago I had some very intimate personal relations with it, and the remembrance is still vividly with me. I will not inflict any systematic lecture upon you, who are better posted on the subject than I, but simply give some of my personal and professional experiences, with incidentally a few thoughts if I have any.

Osler defines pneumonia as "An infectious disease characterized by inflammation of the lungs and constitutional disturbances of varying intensity. The fever terminates abruptly by crisis. Secondary infective processes are common. An or-

* President's address before the Schuylkill County Medical Society, January 8, 1895.—From advance sheets Lehigh Valley Med. Mag.

ganism, the diplococcus pneumoniae, is invariably found in the diseased lung." Remember now that I am only giving my own experience; but as to its being an infectious disease, I do not remember ever seeing one case that could be directly traced to another. Although any disease in which there is an active organism at the bottom of the trouble could probably be classed as infectious. As a contagious disease I have no fear, as I have never seen a nurse contract the disease from a patient, have never been able to trace one case to another, and have never seen pneumonia epidemic. Our definition also says that "the fever terminates abruptly by crisis." I have frequently seen the fever so terminate, but doubt very much if such ending is the rule; of late years I have rather thought it to be the exception.

About the history of pneumonia. In almost all cases coming under my personal observation, there has been an initial chill; and I can speak feelingly of that chill—such a sickening, weakening, miserable, unconquerable chill goes with no other disease. After the chill comes that awful pain, lasting sometimes two days or more, but usually and fortunately yielding to treatment sooner. Of course I don't mean to say that all pain leaves that soon, but the sharp, pleuritic pain, which is agonizing at each breath, and the breathing is very rapid at this time, does leave usually in a day or two. After the chill the temperature goes up very rapidly in most cases, but sometimes we find a case with great congestion of lungs and very little rise of temperature; and when you have such cases look out for collapse, heart failure, etc. In fact watch the heart carefully in any case of pneumonia. About this time there will be marked dullness at some parts of one or both lungs, with very often some bloody expectoration. Although the expectoration frequently does not appear until later in the course of the disease. I have seen a few cases run their course with but little expectoration at any time. In cases terminating by crisis the conditions described last for perhaps seven to ten days, when the temperature falls; there is copious expectoration, sometimes almost a hemorrhage; usually considerable diarrhœa, and our patient is speedily on the road to recovery. Again the temperature falls gradually to normal; the expectoration is more moderate in amount; convalescence is more tedious but the ultimate result is still good. Another class of cases are those in which there is no expectoration and the congested and solidified lung must get rid of its unwelcome contents by absorption. These cases are a long time getting well; sometimes they make good recoveries, but frequently there is left a chronic catarrhal pneumonia, or some dullness on percussion, meaning, of course, a solidified spot of lung-tissue which may or may not cause abscesses or other trouble in the future. All our cases do not get well. Some die of general exhaustion, some of exhaustion of the heart; sometimes abscesses form and the case becomes what is commonly known as "galloping consumption." In regard to secondary infective processes, I have seen very little trouble of that kind. Occasionally abscesses have formed in different parts of the body. In my own case I enjoyed a very large, able-bodied abscess on my cheek for some time.

After this brief, imperfect, and desultory history of the disease, a few words concerning treatment will not be amiss. If you see, as you rarely do, your patient in the chill, try, by all means, to break it, as I firmly believe the harder the chill the more internal congestion and future mischief. Alcoholic stimulants I have never seen do much good at this stage; but aromatic spirits of ammonia has served me well in some cases, with plenty of external heat; not by piling covering on the patient and prostrating him still more, but by means of hot water bottles, bags, or even stove plates. Try to restore the normal warmth of the skin and get all the blood to the surface that you possibly can. Friction with a towel, or even the hand, under the covering, frequently aids considerably. If, after the chill, there be much trouble with the breathing, the patient's face becomes blue and there seems, as I have seen once or twice, to be imminent danger of death, really from suffocation, bleeding seems to be urgently called for. I am not at all in favor of bleeding every case of pneumonia, as I have seen advocated by some physicians. Bleeding, I fancy, is only called for in few cases and then, to be of benefit, must be resorted to early and done so thoroughly as to completely relieve the congested lung. I think only able-bodied, full-blooded subjects stand bleeding at all. Full doses of

veratrum viride are very beneficial in some cases. There has been lately a great cry against expectorants in pneumonia; but I am old-fashioned enough still to believe in them, and use them early and late in the case, with full doses of Dovers' powder to relieve pain and promote secretions. Poultices of corn or linseed-meal are sometimes very grateful to the patient, but lately I have seldom employed them, using instead a cotton jacket pretty thick, and a good stimulating liniment. I still consider the hot poultice valuable where there is that horrible pleuritic pain. Cantharidal blisters I never use until after the first week; but have found them serviceable where resolution appears to be delayed. Digitalis must never be forgotten when the pulse is very frequent and heart weak. Alcohol, quinin, and turpentine internally, when the tongue is dry and brown and the typhoid state, with all its dangers, is upon us. Mustard plasters and turpentine stupes are always in order. In those cases where resolution does not occur potassium iodid and other iodin compounds have been very serviceable. In some cases where the lung apparently has cleared, but the nervous system does not recover its tone, and convalescence is protracted, syrup of the hypophosphites has been my friend many times.

I have said nothing as yet about the temperature, as I pay very little attention to it unless it goes to the neighborhood of 103°. I have used antipyrine, well guarded with whisky, in strong subjects, and so guarded have never seen it do any harm. Sometimes good doses of quinin sulfate seem to answer, and again, tincture of aconite root does the work better than anything else.

In conclusion I must apologize for inflicting such a worthless paper upon you and thank you for taking the time to listen to me.

INDIRECT TOXICOLOGICAL ACTION OF STRYCHNIA ILLUSTRATED BY A CASE IN PRACTICE.*

JOHN J. SCOTT, M.D.,† SHREVEPORT, LA.

My attention having been recently called to a similar physiological effect, but in a different line, which I copy further on from the *Northwestern Lancet*, induces me to report this one, as follows:

It is asserted that chickens fed upon a food in which strychnia has been mixed are not affected toxicologically by eating it, and that such is the case with any animated creature containing a gizzard as part of the digestive apparatus.

It is also asserted that hawks and owls that eat of the flesh of chickens thus fed will, however, be poisoned by the flesh thus eaten, provided an adequate amount of the poison be taken in the system.

Others deny the latter assertion and say that such flesh as food is innocuous.

A case in point:

Called to see a stout, able-bodied negro man, aged about thirty years, weight 160 pounds. Saw him about 4 o'clock in the afternoon, August 23, 1888. Was told that he had been suffering for a day or two from chills, followed by slight fever; but that between the paroxysms he had attended to his duties as teamster on the plantation. On the morning of the day of my arrival it was thought he would be able to resume work as usual, but later in the day, about noon, being looked after, he was found to be in an unconscious condition, lying on his pallet in his cabin. On my arrival I found him unconscious, delirious, with left leg and arm in a stiff or rigid condition, while the right foot, the leg being extended, was in constant rocking motion from right to left, resting on the heel. The pulse was thread-like and too frequent to be counted. Temperature was 104½° F. in axilla; pupils dilated. There existed also a tetanic condition, opisthotonos being manifested.

The treatment was directed toward

* Read before the Louisiana State Medical Society, 1894.

† Ex-President Shreveport Medical Society and Member of the Louisiana State Medical Society, etc., etc.

overcoming the tetanoid condition and to restore consciousness. As I learned nothing accurate as to the preliminary symptoms or conditions, it was impossible to arrive at a satisfactory diagnosis.

Suffice it to say all treatment proved unavailing. He died without any modification of the symptoms eighteen hours after I saw him.

Some weeks afterward I accidentally learned from the planter in whose employ he was, that prior to that date he had fed his chickens upon food containing strychnia, given to them with a view of killing the hawks that were depredating upon his fowls. Now, in this little item of intelligence, casually given, I saw and understood in a moment the peculiar symptoms of my patient, which was not so clear then. He certainly exhibited symptoms of strychnia poison, but not pronounced enough to excite one's suspicion at the time.

The inference I now draw, and I am convinced of its truth, is that the peculiar condition of my patient and his death was due to his having partaken too freely of the fowls prepared for the hawks, said fowls not having died from the effects of the strychnia, and yet their flesh so saturated with the poison that it proved fatal to the human system. Undoubtedly one may be affected by partaking of the flesh of an animal that has swallowed any particular medicinal or poisonous agent, while no harm may come to the animal that has swallowed the agent.

Here follows something recently upon the subject, and is recorded as "A Recent Medical Curiosity," that occurred in this way, as given by the *Northwestern Lancet*, viz.:

"An epidemic of priapism is a recent medical curiosity related by a French army surgeon.

"The troops while marching through Northern Africa halted at a station where nearly all the men were seized with prolonged and painful erections, followed by lassitude, dryness of the throat, and finally, in some cases, hæmaturia.

"Investigation showed that the men had eaten freely of frogs killed on the bank of a neighboring stream. Over the stream hung willow and poplar trees, upon whose branches were numerous insects of the family of cantharides.

"These insects fell into the stream, were eaten by the frogs in turn were eaten by the soldiers. The taste of the flesh of the frogs was said to have been in no way affected by the aphrodisiac diet."

This case was reported as presenting a pathologico-physiological question that to my mind is of sufficient signification to interest the profession, and as such is respectfully submitted.

The Therapeutic Value of Ice in Ophthalmic Surgery.

McGillivray (*Ophthalmic Review*) commends the topical employment of cold in ophthalmic surgery. In case of recent injury to the eyeball the eye is bathed with a sublimate solution ($\frac{1}{5000}$), the patient is put to bed and instructed not to open his eyelids, and ice compresses are applied immediately amd continuously. If, after a day or two, no inflammatory reaction has set in the compresses are withheld. In cases attended with inflammation, the application is continued till the process has subsided. Each compress is removed as soon as it begins to lose its cold feeling, and a fresh one is applied.

The Circulatory System in Typhoid Fever.

Dr. F. Billings, in the Chicago *Medical Recorder*, says that while marked anatomical changes in the heart in typhoid fever are not common, yet a slight thickening of the mitral valves and a general muscular flabbiness of the organ, attended with fatty degeneration, are often present.

The heart sounds may at first be clear and normal, but in severe cases the first sound often lessens in strength and duration, and in very low cases it may not be heard at all.

The Treatment of Certain Neuroses by Oxygen Inhalations.

Dr. V. Romaro, according to *La Semaine Medicale*, has found oxygen inhalation very beneficial as an adjuvant in the treatment of so-called function neurosis of a convulsive type. These inhalations diminish the intensity and duration, and sometimes abort the paroxysm, of a convulsive attack. Employed systematically they gradually reduce the number of attacks, improve the general health, and may effect complete recovery. The therapeutical effects of these inhalations are said to be due to the fact that the oxygen counteracts the asphyxial state of the tissues and destroys the ptomaines.

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

TREATMENT OF PHAGEDENIC CHANCRE.

Dr. E. Braatz (*Centralblatt Fuer Chirurgie*, No. 52, 1894) warmly recommends treating phagedenic chancres with topical applications of cupric sulphate. He employs a solution, for with the powder a crust is formed under which the ulcer continues to progress. The ulcer is cocainized with a 10 per cent. solution, the undermined edges trimmed away and then the ulcer cauterized with a 1:5 solution of the sulphate; compresses are afterwards applied, wet with a 1:5000 solution. These latter at first renewed three times a day, later once a day, and are covered with a strip of rubber protective. As the pain of cauterization often continues some time after the cocaine has ceased to act, a morphine injection may be given either before or after. On account of the obstinate character of the affection the cauterization may be required to be repeated several times before the process is cured.

A PILL FOR SCIATICA.

Dr. W. Richardson (*L'Union Medicale Du Canada*, No. 8, 1894) speaks highly of the following pill in sciatica:

Opium		
Ipecac	āā	grs. ¾
Salicylate soda		grs. vss
Fl. Extr. Cascara, Sagrada		q s

Sufficient for one pill. Make twenty such. One to three a day.

ACUTE BRONCHITIS.

Dr. D. C. Lewinthal (*La Semaine Medicale*, No. 2, 1895), in the treatment of acute bronchitis, has found the following formula efficacious:

Carbonate ammonia			
Salicylate soda	āā 4	o	5j
Elixir paregoric			
Syrup orange peel			
Syrup tolu	āā 30	o	5j
Water	60	o	5ij

A dessertspoonful every three hours.

A SALVE FOR BURNS.

Dr. Starr (*L'Union Medicale Du Canada*, No. 8, 1894) recommends in the treatment of burns the following salve:

Tr. perchloride iron	m liv
Vaseline	5 iv

Applied at once to a superficial burn this salve will calm the pains and prevent the formation of blisters. It is also an excellent dressing for ulcers following deeper burns.

TREATMENT OF MALIGNANT PUSTULE.

Professor Bramann (*La Semaine Medicale*, No. 2, 1895) warmly advocates the local application of mercurial salve as a means of successfully treating malignant pustule. The patient is put to bed, and if a limb has been attacked it is suspended, the region affected is rendered aseptic and a layer of mercurial ointment of twice the officinal strength is applied topically. The diet should be very nutritious and alcohol be administered liberally. No surgical measures should be attempted, as they only favor the extension of the disease. Out of thirteen cases thus treated since 1890 he had no deaths, though there were several that were quite severe.

FROST BITES.

Dr. J. R. Wood (*L'Union Médicale du Canada*, No. 8, 1894) advises the local use of the following salve in frost bites:

Oxide Zinc		grs. lx.
Powdered Camphor		
Powdered Myrrh		" xxx.
Powdered Opium	āā	
Lard		5 j.

CHRONIC CONSTIPATION.

In *La Gazzetta Medica di Roma*, No. 12, 1894, in the treatment of chronic constipation, the following pill is recommended:

Aloes	grs. iv.	
Sulphate Strychnine	"	¼.
Extr. Belladonna	"	j. ¼.
Powdered Ipecac	"	vss.

Sufficient for twelve pills. One each evening.

ASTHMA.

In *L'Union Médicale du Canada*, No. 8, 1894, the following formula is praised in asthma:

Chloral		
Iodide Potash	āā 5	ss.
Syrup Orange Peel	5	vj.
Water	5	vj.

Two to five soupspoonfuls a day.

* In charge of the translator, F. H. Pritchard, M.D.

LOCAL GANGRENE FROM CARBOLIC ACID DRESSINGS.

Dr. Laugier (*Hospitalstidende*, No. 2, 1895), communicates three new cases of gangrene of the fingers from a long continued carbolic acid dressing. In one case the patient has employed a 1 per cent. solution of the carbolate of soda while in the other two the ordinary 2 per cent. solution of the acid was used. None of the patients had any particular inclination to gangrene. He therefore warns against employing ½ per cent. solutions of this antiseptic on the fingers as it may cause gangrene. This is possible not only in children and young persons but also in adults of both sexes without either albuminuria, diabetes, alcoholism or endarteritis being present.

TO REMOVE A PLASTER DRESSING WITH EASE.

Dr. Gigli (*La Semaine Médicale*, No. 3, 1895), in order to facilitate the removal of plaster of paris dressing from limbs proposes the following ingenious plan: After application of the usual thin layer of absorbent cotton around the limb, parchment paper which has been previously moistened is wet and applied. Over this in the direction that the dressing is to be sawed open a good sized string which had been well rubbed with vaseline is laid on and the dressing then applied. The ends of the string are then tied together over the bandage. When in the course of time, the plaster dressing is to be laid off the ends of the cord are untied, one tied to the end of a sufficiently long steel wire which has been closely nicked is drawn through the channel filled by the oiled string and after each end of the wire has been attached to the handles of a chain saw it is drawn to and fro until the plaster has been sawed through. Then the dressing is easily removed.

CHRONIC ALCOHOLISM.

Dr. Zdekauer (*La Semaine Médicale*, No. 7, 1895) recommends in treating chronic alcoholism the following formula:

Satur. solut. chlorine water ...	8	ʒ ij
Decoction althæa.....	155	ʒ iv ℥vj
Simple syrup.....	15	ʒ iv

This will not only ameliorate and cure the gastric disturbances of chronic alcoholism but also will suppress the irresistible desire for alcohol. This is due he thinks to a state of chronic irritation of the nerves of the gastric mucous membrane.

OXIDE OF COPPER AS A TAPE-WORM REMEDY.

Dr. F. Schmidt (*Wiener Medizinische Presse*, No. 3, 1895) has been convinced on himself as well as in four other patients of the efficacy of the oxide of copper as a tape-worm expeller. He employed the following formula.

Black oxide copper.....	6	ʒ jss
Prepared chalk.....	2	gra. xxx
Argilla.....	12	ʒ iij
Glycerine.....	10	ʒ ijss

Sufficient for 120 pills. From eight to twelve a day.

During the first week the patient takes from two pills four times a day; during the second three pills four times a day and abstains from acid drinks and foods. After two weeks a good dose of castor oil is taken. In case of children who cannot swallow pills it may be administered in tablets as follows:

Black oxide copper.....	5	ʒ j ℔
Prepared chalk.....	1	gra. xxx
Carbon., magnes., ää.....		
Gum tragacanth.....	10	ʒ ijss
Glycerine.....	5	ʒ j, ℔
White sugar.....	40	ʒ j, ʒj
Destilled water, q. s.....		

Sufficient for fifty tablets. From two to three a day.

The writer himself took the drug on account of a bothriocephalus; during the first few days he experienced slight pains in the iliac fossa. From the fourth day on he found, in the passages, numerous and greatly altered segments of the worm and in two weeks after a dose of castor oil, the entire worm was expelled. The same result was obtained in the other four patients.

A LINIMENT FOR ECZEMA.

Dr. J. K. Tomory (*La Semaine Medicale*, No. 7, 1895) has found in eczema even in rebellious forms the following liniment of great value as a local application:

Oxide zinc.....	20	ʒ v
Powdered boric acid.....	10	ʒ i jss
Subnitrate bismuth.....	5	ʒ j, ℔
Olive oil.....	85	ʒ iij, ʒv

TREATMENT OF PSEUDO-MEMBRANOUS ENTERITIS.

Dr. A. Mathieu (*Lo Sperimentale*, No. 3, 1895) recognizing constipation as the

principal cause of this affection advises, in mild cases, a regulation of the diet with addition of fruits and vegetables to the list, and the employment of mild purgatives as magnesia, podophylline, cascara sagrada or rectal injections of water to which glycerine has been added or the employment of oil alone; suppositories are also serviceable. In more severe cases he advises rectal injections of olive oil warmed to the temperature of the body. In these cases castor oil in small doses is an excellent laxative as well as olive oil, which may be ordered with an initial dose of three or four teaspoonsful in the morning with increase of the dose to a cupful on the fourth morning. The patient may then rest. Leave it off for four or five days and commence again. Not all patients can bear this treatment. In such Sée advises the employment of senna and hydrastis as follows:

Extr. hydrastis	2-3	o	grs. xxx-xlv
Senna leaves.....	6	o	ʒ jss

Sufficient for thirty pills. One after each meal.

He has also found belladonna of great value for it is both laxative and anodyne.

Intestinal antiseptics are of doubtful efficacy if given by the mouth, but if injected in solution rectally, slowly and gradually, they are of undoubted service. One may begin with one-half a litre and terminate with an injection of two litres after several days. A solution of borax to boiled water, 2-3:1000, is especially commended.

To modify the pathological secretion rectal injections of iodine water or solutions of nitrate of silver may be tried. As to diet all foods that leave much fecal residue are especially forbidden as they favor fermentation in the intestines. In mild cases a diet chiefly vegetable is to be tried, but in the severe ones this would do actual harm. Therefore, one may begin with milk, soups, eggs, mashed potatoes and meat, but in a moderate quantity. Then one may gradually pass over to vegetables and fruits at first boiled and then raw.

In treating the pains which are frequently quite severe, opiates favor constipation and are to be avoided. Instead one may employ hot applications and menthol as follows:

Menthol.....	o	20	grs. iij
Alcohol q. s to dissolve			
Simple syrup.....	25	o	ʒ vj, gtts. xv
Water.....	100	o	ʒ iij, ʒj

Belladonna will not increase the constipation. To improve the general health one will use warm douches, massage, gymnastics, etc.

ACONITE IN CHILDREN'S DISEASES.

Prof. Comby (*Rivista Clinica F. Terapeutica*, No. 1, 1895) on account of the depressive and sedative effects of aconite recommends it in all spasmodic states as asthma, the asthmatic attacks of enlargement of the bronchial glands, in whooping cough and similar states, in stridulous laryngitis, palpitation of the heart and convulsions. It is contraindicated in all states of prostration where respiration is impeded and the heart is about to weaken; therefore, one should not prescribe it in capillary bronchitis, in broncho-pneumonia, pneumonia, in valvular heart affections, in pericarditis and in the collapse of severe forms of infectious diseases.

The alcoholic tincture of the root is especially to be used. In adults one may employ aconitine, yet it is an alcaloid which must be given with great circumspection, administering it in doses of a tenth of a milligram, at regular intervals. It should not be used in children's diseases. The tincture of the root is to be given by the drops and never by the gram and at regular intervals. In a child of two years one may give from five to ten drops; one of five years, twenty drops in twenty-four hours, while up to ten years thirty drops is a proper dose. No great benefit is to be expected from small doses.

PALLIATIVE TREATMENT OF UTERINE CANCER.

Dr. Bowreman-Jesselt (*La Semaine Medicale*, No. 7, 1895) after removal of the necrotic shreds from the cervix and vaginal walls by absorbent cotton and administration of an antiseptic irrigation applies to the whole diseased surface the following solution:

Chromic acid.....	20	o	ʒv
Water...	75	o	ʒij, ʒij, ¾

It should not be allowed to come into contact with the surrounding healthy tissues which are best protected by painting them with a saturated solution of bicarbonate of soda. After application of the chromic acid the vagina is tamponed with iodoform gauze and a morphine and bella-

donna suppository introduced into the rectum. This treatment is repeated three times a day with a preliminary antiseptic irrigation of the vagina. In a few days a great quantity of necrotic tissue will be cast off with subsequent improvement. The vaginal discharge will be less fetid, the pains will decrease in severity, the appetite increase and the general health ameliorate.

TREATMENT OF NOSE-BLEED.

Dr. Lermoyez (*Hospitalstidende,* No. 2, 1895) in slight cases of nose-bleed advises compressing the nose between the thumb and forefinger for ten minutes; if that be insufficient then apply locally a tampon moistened with a 10 per cent. solution of antipyrine which is an excellent hemostatic and much superior to cocaine (1:5) which latter not only has the disadvantage of being toxic but also of being possibly followed by further hemorrhage after the vaso-constrictor action has passed away. It is also to be preferred to solutions of chloride of iron which are strong irritants and may give rise to gangrenous ulcers. In more severe cases a nasal speculum is introduced and the anterior portion of the nose tamponed with fine strips of iodoform gauze four inches in length and one in breadth; these are introduced with fine forceps. As the hemorrhages nearly always arise from the anterior portion of the nasal cavity there is no necessity of tamponing far back. Tamponade of the posterior nares is not only entirely unnecessary but brutal and often dangerous.

PARENCHYMATOUS INJECTIONS OF SALICYLIC ACID IN UTERINE CANCER.

Dr. F. Fafius (*La Semaine Medicale,* No. 8, 1895), in several cases of inoperable cancer of the uterus has obtained very satisfactory results with parenchymatous injections of a 6 per cent. solution of salicylic acid in 60 per cent. alcohol. The hemorrhages ceased as well as the fetid discharge, the pains decreased in severity, the general health decidedly improved and the evolution of the disease was greatly retarded. He employed at each time from one to four ccms. of this alcoholic solution in five or six injections into different parts of the cancerous portion.

PRURITUS OF THE VULVA OF NON-PARASITIC ORIGIN.

In *Le Progrès Médical,* No. 51, 1891, the following preparations are spoken highly of as local applications in vulvar pruritus:

(1) A 1:100 solution of chloral			
(2) Menthol	4	0	3j
Acetic acid	140	0	3iv, 3iij
Alcohol	30	0	3j
Water	150	0	3iv, ¾

LOCAL TREATMENT OF BURNS.

Professor Schwimmer (*Ibid*) recommends in the treatment of burns the following local applications:

Salicylic acid	0	50	grs. viiss
Oxide zinc	10	0	3iiss
Starch	40	0	3j, 3ij
Boric acid	5	0	3j, ¼
Oxide zinc	10	0	3iiss
Vaseline	35	0	3j, grs. xlv
Aristol	10	0	3iiss
Olive oil	20	0	3v
Lanoline	40	0	3j, 3ij
Picric acid	50	0	3j, 3iv, grs. xxx
Distilled water	1000	0	3xxx, 3ij

Hallucinations and Illusions of the Sane.

Inglis (*Am. Lancet*) calls attention to the fact that while "the law has laid much stress upon the phenomena of illusions and hallucinations as being evidences of insanity, it is more and more clearly evident that these phenomena do not necessarily indicate insanity at all. They frequently occur in the sane, however, and play an important part in the deranged mental processes. Still it remains true that perfectly sane people frequently have illusions or hallucinations, or both."

He reports some interesting experiences of his own of hallucinations, largely under control of the will. One of these was a galloping horseman, who could be made to go fast or slow, or multiplied into a whole troop. Another experience was one of a pure beautiful color, without form. When present the color could be changed by effort or will, but could not be voluntarily produced.

Treatment of the Exanthemata.

Armstrong, in the *Medical Magazine,* thus concludes a study of this subject:

1. That antiseptic inunction does not exert any specific power over infectious diseases.

2. That it has but little, if any, power in preventing the spread of infection.

3. That cases treated thus are more subject to complications.

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SATURDAY, APRIL 6, 1895.

EDITORIAL.

CURTAILING A TALE.

The attention of THE REPORTER has been directed to a recent newspaper tilt between a well-known surgeon and teacher of this city, and the President of the S. P. C. A. Just or unjust, the suspicion arises that the controversy has been gotten up to advertise the great surgeon in the daily papers, and one cannot help wondering whence came the commission to speak for the medical profession so dogmatically. Many a good man thinks the childish anti-vivisectors are about as near right as the men who call women liars, and who write popular magazine articles to prove vivisection a blessing by quoting the writer's own wonderful surgical cases. Is there not such a mania as anti-antivivisectors, and such a poor amusement as prodding zoöphiles without occasion?

Probably the most accurate and impartial report of the incident in question is that in the *Public Ledger* for March 15th. We base these remarks upon it. Those who have seen the entire correspondence agree that the artificial warmth and unwarranted publicity on the part of the aggressor well deserved the crushing rebuke elicited. Further notice would be unnecessary were it not that garbled and unfair accounts of the matter appear in some influential medical journals.

Science never gains by the suppression of truth. It is unjust to misrepresent the performance of a plain duty on the part of an honest opponent, or to deride the courage of conviction. It is pusillanimous to assail any without the means for self-defense.

The whole affair reminds one of a "dog-gone" mystery of a former generation.

In a certain quiet neighborhood there are yet living a few who retain vivid impressions of one (call him) Snider and his remarkable dog. Snider was an artisan of more than ordinary ability. He was proud of his skill although he depreciated

the eulogies pronounced over his achievements. His restless genius outgrew the limitations of his daily occupation and he sighed for new worlds to conquer. He determined to renovate nature and give to men some ideas replete with modern improvements. An old acquaintance once said of him: "His ego is eccentric centrifugally to enable centripetal concentration." [We do not know what this may mean unless it be that he devised novel methods for centering upon himself public attention.] "He resembled Cæsar rather than Cæsar's wife—being ambitious, if not above suspicion."

Snider acquired local celebrity as a *savant* by demonstrating, zoölogy to the contrary notwithstanding, the near kinship between the oyster and the elephant through the fundamental characteristic common to both—the inability to climb a tree. He claimed to have made other discoveries equally valuable. His greatness was an essential part of his individuality. Like some peculiar odor or aroma, it was most in evidence when Snider himself was. Like a scent, apart from its source, it could not be produced by any effort of the imagination. Owing to this quality, his fame might have vanished when Snider joined the great majority, had it not been for the tail of his dog.

Regarded as a dog Snider's animal presented no peculiarities save that it was emotional. A thoroughbred mongrel, it was of no particular blood; it enjoyed no advantages of caste; it had no over-weening pride of lineage—it was just dog. Snider conceived the idea that the highest nature of a dog was located in its tail; hence the ultimate purpose of canine life was the development and expansion of this important part of its anatomy. His observations had led to the discovery that all "centers" governing the expressions of canine thought and feeling were situate in the proximal end of the caudal appendage. As the idea grew the dog ceased to wag the tail: the tail wagged the dog. In the progress of evolution the animal was no longer essential and finally disappeared, leaving with the triumphant Snider a dogless tail. Snider exclaimed "Eureka!"; the initiated murmured, "Gloria!"; the ignorant masses ejaculated, "Helen Blazes!" There was no dog; it was all tail.

The present instance forcibly reminds us of the evolution of Snider's dog. Here again the dog was of use solely to provide a support upon which to hinge a tale of abnormal dimensions. So clearly is this purpose made evident when the *entire public* correspondence is considered, that none can doubt the justice and propriety of the scathing rebuke by the President of the S. P. C. A., so courteously administered:

"In conclusion allow me to say that, so far as I can perceive, Dr.——has effected nothing by this correspondence, beyond drawing attention to his own skill and great experience, for which I am quite willing to take his word."

The lady was "in at the death" and, unquestionably, she secured the "brush."

Dry Mouth, or Xerostomia.

Dr. Thomas Harris showed a woman, aged thirty, who had had good health until three or four years ago, when the disease made its appearance. Mouth was absolutely dry, and there was a complete arrest of secretion of all the salivary and buccal glands. There was also a decided enlargement of the parotid glands. The woman was anæmic, but all the organs appeared healthy. There was no disease of the pelvic viscera. Dr. Harris referred to the very few cases of the malady which had been recorded, and especially to two cases of relapsing parotitis recorded by Mr. Jonathan Hutchinson, one of which was associated with a certain amount of dry mouth. Dr. Harris regarded xerostomia as a fuctional nervous affection, and thought that probably the parotid enlargement had a similar cause, and referred to Mr. Stephen Paget's communication on the relation of parotitis to injuries and diseases of the abdominal and pelvic viscera.

SOCIETY REPORTS.

PHILADELPHIA ACADEMY OF SURGERY.

Meeting of February 4, 1895.

Thomas G. Morton, M.D., presented a

CLINICAL NOTE ON A CASE OF CALCULUS IMPACTED IN THE URETHRA, WITH GANGRENE AND RUPTURE OF THE URETHRA; EXTENSIVE EXTRAVASATION OF URINE; RETENTION OF URINE FOR NINE DAYS; OPERATION BY EXTERNAL URETHROTOMY, FOLLOWED BY RECOVERY OF PATIENT.

William R., aged sixteen, a well-grown youth, was admitted into the Pennsylvania Hospital, January 2, 1895, with the following history:

Has had irritability of the bladder, and frequent desire to urinate for a long while, and occasionally noticed a stoppage of the flow while urinating. On December 23d, after such an experience, the interruption became permanent. On the 26th, as he was in great distress, he consulted a physician, who found a stone impacted in the penile urethra about two and a half inches from the meatus. In efforts at extraction the stone crumbled to pieces, but it was removed and the patient states that he then passed about a cupful of blood, but did not empty his bladder. A few hours after the operation the penis and scrotum swelled, forming a tumor which became dark-colored in patches. There was absolute retention of urine. His general condition becoming serious he was brought to the hospital on the ninth day after impaction had occurred.

When admitted into the hospital he was in a condition of shock; he was exceedingly feeble and had septic fever. The penis and scrotum were œdematous and enormously swollen, assuming the form of a dense globular tumor the size of a large orange; the skin of the penis and scrotum was gangrenous. Before coming to the hospital a surgeon had scarified the surface but without affording any relief. The bladder was distended to its full extent and the tumor was the result of extravasation consequent upon rupture of the urethra due to gangrene.

Operation. An incision was made in the median line, extending from the penis through the scrotum, to the perineum, and a large collection of urine was discovered which formed the tumor. The incision divided the scrotum in the middle and exposed the urethra, which was gangrenous to the extent of about two inches; the spot where it had ruptured was in front of the scrotum, evidently where the stone had lodged. The perineal urethra was then opened and the bladder evacuated. A drainage-tube was slipped into the bladder from the wound and a tube was also passed from the meatus. After two weeks both the drainage-tubes were removed. The dead tissues soon separated, leaving a healthy granulating wound. The bladder was evacuated daily with a silver catheter and the further progress of the case to recovery was uneventful. The patient is now presented, a month after the operation, with the wound in a healing condition with the large urethral fistula still open.

The repair of that portion of the urethra which was destroyed may necessitate a plastic operation, especially if it should be found that, in the process of cicatrization, contraction and deformity of the organ is likely to occur.

DISCUSSION.

DR. MORTON: This case is presented partly on account of the unusual character of the accident, but more especially in regard to the length of time absolute retention existed without bladder rupture.

In regard to the closure of the fistula it would seem prudent to wait until the repair now progressing shall show what form of operation may be required.

DR. JOHN H. PACKARD: The only thing to do is to make a perineal section

in the membranous portion of the urethra, and keep the anterior portion completely at rest. When repair has gone as far as it will, then an after-operation can be considered.

DR. WILLARD: The case reminds me of one I saw fifteen or twenty years ago. The man, after gonorrhœa, had a stricture, and he was in the habit of catheterizing himself. One day urination ceased and retention occurred, as he thought, from the stricture. I first saw him on the fourth day of this condition. At this time the scrotum was gangrenous. The whole anterior portion sloughed off and both testicles were bare. Rupture of the urethra had occurred in the prostatic portion, where a stone had lodged, blocking the urethra and causing gangrene. I treated the case by incision in the perineum and scrotum, removing the stones. The wound healed slowly, but without difficulty, and the man lived several years afterward. The incision in that case was two or three inches in length, but did not extend as far forward as in Dr. Morton's case.

DR. W. W. KEEN: The most interesting question here is the restoration of the urethra. Two cases that occurred in my practice some years ago have some bearing upon this. One was a patient in the country, who received an injury of his perineum as the result of jumping and coming down upon the sharp corner of a board, which penetrated the perineum to the depth of two or three inches to the prostate and completely lacerated the urethra. He was brought in from the country, and I saw him on the third day. No urine had been passed. I attempted to make a perineal section, but the tissues could not be recognized. I, therefore, gave up the perineal incision, put him in the Trendelenburg position, and opened the bladder above the pubes. I then performed retrograde catheterization. In performing the perineal operation I had tied a large mass of bleeding tissue, and discovered on making retrograde catheterization that I had included the corpus spongiosum and the urethra in the ligature. I cut the ligature and introduced a silver catheter, and kept it in the urethra for six weeks; the granulation tissue grew around the catheter and restored the urethra completely. Subsequently, by gradual dilatation, I increased the calibre to No. 30, and kept it at this by occasional dilatation, by the sound.

The second case occurred two years ago last summer. A man, in vaulting on his bicycle, missed his aim and landed upon his wheel. He ruptured his urethra without breaking the skin. There was complete retention, and I began a perineal section. After a long search for the urethra I was about to give it up and do a suprapubic operation, when I succeeded in finding the urethra. I left a catheter in for several weeks, and succeeded in re-establishing the calibre of the urethra as in the former patient. It is possible that the same thing might be done here. If the silver catheter is left in place the granulation-tissue might spring up around it and obviate the necessity of a plastic operation. At all events, it would make a subsequent operation less extensive.

DR. PACKARD: About fifteen years ago a boy was brought into the Pennsylvania Hospital, who had fallen across a board and caused rupture of the urethra very close to the bladder. In that case there was no sloughing, simply a rupture at the neck of the bladder, just within the sphincter. He was brought in from the country, and attempts had been made to pass the catheter, but without success. I had him put in the lithotomy position, and made a perineal section. I was in hope of finding the vesicle extremity of the urethra, but that was not possible, and I therefore resorted to the same expedient as that which Dr. Keen had spoken of. I performed suprapubic section and retrograde catheterization. I succeeded in passing a soft instrument through from the penis, and I had no further trouble, and the patient made a good recovery.

DR. HENRY R. WHARTON: I recall having seen four cases of impacted urethral calculus. The first was a boy of four or five years of age, under the care of Dr. Lenox Hodge at the Children's Hospital in this city. He was brought in several days after impaction occurred, and sloughing and urinary infiltration existed. He died in the course of a few days after operation, and it was found at the autopsy that he had typical surgical kidneys. The next case was a child five or six years of age, a patient of Dr. Samuel Ashhurst, in which I helped him operate. The impaction had only existed for twenty-four hours, and there was no gangrene and no

rupture of the urethra. It was found impossible to remove the calculus through the meatus, and an incision was made just behind the stone, and it was taken out. A couple of stitches were used to bring the wound together, but they did not hold well, and the wound healed eventually by granulations. The next case was a man who was brought into the Presbyterian Hospital with retention of urine for twenty-four hours. He had a stone in the urethra at the peno-scrotal junction. I succeeded in grasping the stone with forceps introduced into the urethra, and removed the calculus without difficulty; the patient recovered. The last case was one seen with Dr. Dick; it was a boy four years of age. Retention of the urine had existed for twenty-four hours. I went prepared to operate, but just before I reached the house I was informed that he had passed the stone, which I now present, and there was no further trouble. In all the cases I have seen the impaction has occurred at the junction of the penis with the scrotum, which seems a favorite place for the stone to be arrested in its passage. With regard to the subsequent treatment of the case shown by Dr. Morton, it appears to me to be better to wait to see how much will remain after cicatrization is complete. In such a case I would make a perineal section before attempting to reconstruct the urethra. The condition is more favorable than hypospadias, because a considerable part of the anterior urethra is present.

W. W. Keen, M.D., discusses a paper on the

AMPUTATION OF THE ENTIRE UPPER EXTREMITY (INCLUDING THE CLAVICLE AND SCAPULA) FOR SARCOMA FOLLOWING FRACTURE OF THE CLAVICLE.

E. S., aged twenty-one years, first consulted me early in December, 1894. In May, 1893, he broke his left collar-bone by a fall. In June, 1894, a tumor appeared at this point, which together with one-and-one-half inches of the clavicle, was soon afterwards removed by Dr. Stout, of California. The tumor, however, immediately reappeared, and has grown rapidly ever since. For the last month he has been under the care of Dr. Coley, of New York, for treatment by the erysipelas and prodigiosus toxins, but without obvious benefit. At present there is a large tumor extending from the shoulder to the base of the neck and attatched to both clavicle and scapula. It reaches to within two inches of the inner end of the clavicle. I deemed it, however, still possibly operable, because it did not seem to be infiltrating but encapulated. This conclusion I based upon two grounds: First, that the tumor seemed to be very movable with the shoulder, and, secondly, there was not the slightest edema of the arm. This convinced me that the vessels, and especially the veins, were not yet involved. I told him frankly that it was uncertain whether I could remove the growth, but that if he desired it I would attempt the operation. Since he could at least be no worse off by its removal, and even if death followed it would relieve him from weeks on even months of great suffering. He and his family readily consented to operation.

The tumor was ulcerated at two points, and the skin was branny and thick. The conditions, therefore, were unfavorable to a thorough asepsis, but the parts were as thoroughly disinfected as possible. My plan was to adopt the method as described in my paper before the American Surgical Association in May, 1894 (*Transactions American Surgical Association*, 1894, p. 55, and *American Jounral of the Medical Sciences*, June, 1894), namely, to make one incision at the inner border of the tumor with its centre at the clavicle, and another at a right angle along the line of the clavicle down to the bone, to dissect these flaps, and by drawing away the tumor to uncover as much of the clavicle as possible, removing as much of the inner end as I could, and then search for the vessels. If I found that they could be easily ligated I should then proceed to remove the entire upper extremity. If however, the vessels could not be reached that I should then close the wound and abandon the operation. Professor Brinton and Hearn, after careful examination of the patient, both agreed with me as to the advisability of attempting it. Accordingly, he entered the Jefferson Medical College Hospital on December 24th. His temperature was then 100°. His pain

was so severe and constant as to deprive him of much sleep. He was, however, generally in very fair health, though not strong.

Operation, December 26, 1894. The plan outlined above was carried out. I removed two-and-one-half inches of the inner end of the clavicle. Drawing the tumor away, and scraping it from the clavicle enabled me to remove much more than I had expected. I then sought for the vessels, and was so fortunate as to be able to dissect them loose and follow them down to the upper border of the pectoralis minor. At no point did I find the tissues under the great pectoral involved. In order to tie the vessels at so low a point I had gradually extended my vertical incision nearly to the axilla, and having secured the vessels I then decided to proceed with the amputation. It was evident that removing the tumor would remove so large a portion of the skin that it would be impossible to approximate the edges. Accordingly, I determined to carry my incision down on the arm nearly to the elbow and to dissect a flap of skin which was healthy from the inside of the arm, and turn it upward so that the lowest end near the elbow would become the highest when turned upward on the neck. In dissecting the arm loose I removed the larger part of both the pectoral muscle and had to tie a number of smaller vessels. The posterior incision was now made, cutting as wide of the tumor as was possible, the incision passing nearly along the posterior border of the scapula. The separation of the extremity was now readily effected, and a moderate number of vessels ligated. After renewed disinfection of the large surface it was closed. The elbow flap was turned upward on the neck and enabled me to cover the entire raw surface by skin without any tension. As the skin of the inner side of the arm near the elbow derived its nourishment not from the branches of the vessels from the axilla but lower down from the arm, its transplantation was analogous to skin grafting, and I regretted afterward that I had not been very careful to dissect from its inner surface all the fatty tissue of which only a little, however, was left. At four points I inserted between the stitches small portions of iodoform gauze to act as drains.

The patient was put to bed with apparently little shock, his temperature being 97.6°, though the operation had lasted nearly two hours. His recovery was rapid and satisfactory, the temperature only rising once to over 100°. On the sixth day he was out of bed. A small portion of the posterior edge of the flap from the arm sloughed. But for this he would have been entirely well within ten days.

Remarks: At the meeting of the American Surgical Association in Washington, May 29, 1894, I read a paper on "Amputation of the Entire Upper Extremity, Including the Scapula and Clavicle, and of the Arm at the Shoulder-joint, with Special Reference to Methods of Controling Hemorrhage." The key of the whole situation, as I there pointed out, is very clearly the control of the hemorrhage. In the present case operation had been declined by several surgeons on the ground that the disease was too extensive for a successful operation. I was convinced, however, that the vessels were not yet invaded, because there was no edema of the arm, and, also, on moving the tumor in various directions it seemed to me not to be so adherent as to prevent my getting under it and obtaining access to the vessels. My impression was that I would be obliged to ligate the subclavian vessels in the first part of their course; but, after resecting the clavicle and tearing through the tissues behind it, one of my assistants was able to drag the tumor outward, and this gave me an unexpectedly easy access to the vessels, which I was able to follow down to the first part of the axillary artery and tie them there. I was the more anxious to tie them low down, because I foresaw that it would be needful to utilize the skin of the inner arm to fill the gap left by the removal of the tumor, Had this not been done a very large raw surface would have been left, either to granulate or to be covered by skin grafting. I very much feared that even so high a ligation as the first part of the axillary would be followed by some sloughing of the flap of the skin, but fortunately, only the posterior edge of this flap sloughed to a small extent and delayed the healing for about ten days or two weeks.

I was unable to follow the typical method of Berger or that of Treves, but was obliged literally to "cut my coat according to my cloth." The branch of the brachial plexus of nerves going to the

great pectoral was very easily seen and was a very good guide to the vessels. Each vessel was tied with two ligatures of silk, and the vessel divided between them; the artery was tied first, in order to diminish the amount of blood in the vein, and I found this way very advantageous. The amount of blood lost was not very great, and the shock of the patient was very moderate. He made a most gratifying, uninterrupted recovery. Later, when the slough had separated, a few stitches were inserted to draw the granulating surface together.

He weighs less by six pounds than when he entered the hospital, but the portion removed was about ten pounds, so that he has gained about four pounds. The operation was done the day after Christmas, that is, forty-one days ago. This is the second operation of this character that I have done; in both the scar was about the same, although in the former case, a young lady, the tumor was not so large. There was very little shock in either case, although the operation lasted two hours. The first patient was out of bed in five days; this patient was out of bed in six days. The shock was much less than I expected from such an extensive dissection. The patient is now in good health.

John H. Packard, M.D., presented a paper

ON A MODIFICATION OF THE "INVAGINATION" METHOD OF OPERATING FOR THE RADICAL CURE OF HERNIA.

I think it can hardly be necessary to enter into any argument as to the desirableness of effecting the radical cure of hernia in every case where it is possible. My own experience is that there is great difficulty in getting trusses properly fitted as well as in having them properly applied by the patients. Yet a truss badly made or wrongly put on, may be worse than useless; it may cause suffering, and even danger to life.

A radical cure can be accomplished only in one way: by doing away with the sac as such; by obliterating the tube of peritoneum, like a glove-finger, through which the descent of bowel or of omentum takes place. This is the object aimed at in all the proposed procedures, which are very many. Sédillot, in the edition of his *Medicine Operatoire* published in 1855, enumerated twenty-five, and his list was not then complete. The number has been very largely increased since that time, and especially, of course, since by the introduction and general adoption of antiseptic methods, the dangers of such interference have been in a great measure set aside. Modern surgeons have suggested and put in practice much bolder modes of dealing with the problem than could formerly have been employed. By some, as Banks and McBurney, the sac is ligated and cut off as high up as possible. Barker cuts it off at the external ring and carries the stump up to be sutured into the internal ring. Ball twists it up and applies an intercolumnar suture. McEwen and Bishop crumple it up by means of "drawing-string" sutures. Bassini's and Halsted's plans are to make a new canal and a new ring. Landerer makes a plastic operation, transplanting one of the columns of the external ring. Kocher carries the sac away from its position, angulating it twice, bringing it out through an artificial opening in the tendon of the external oblique muscle, and then twisting it.

I do not propose to discuss these various methods, but venture to suggest another plan by which the hernial canal can be closed, I believe securely and permanently, and the object accomplished in a simple way.

I think it may be laid down as a sound rule of surgery, that in all operations there should be as little sacrifice and as little disturbance of the parts as possible, consistently with the attainment of the desired end.

A recent writer says that there are two requisites for an operation for the radical cure of hernia.

"1 Complete elimination of the peritoneal funnel, of which no trace must be left in the canal.

2. The firmest union of the rent in the fibrous layers of the abdominal wall that can be obtained."

He then states that "a proper operation requires the hernial canal to be laid open throughout its whole length up to the level of the internal ring, and the neck of the sac and the peritoneum beyond the internal ring to be completely loosened and dissected free for some distance beyond. Thereafter the walls of the canal must be accurately sutured and brought in the closest possible apposition." In other

words, he would first lay open the abdominal wall, and then close the rent as firmly as possible. But would it not be better to avoid making the rent unless it is absolutely necessary to do so?

I think we can do away with the sac as such without any destruction of its tissues, not eliminating it or laying it open, but simply making use of it, converting part of it into a solid plug, and fastening it into the canal at its inner end, sacrificing nothing. Such invagination of the isolated sac is the essential principle of the procedure which I wish now to describe.

It will be remembered that there were in vogue many years ago a number of invagination methods. Of these perhaps the best known was that devised by Gerdy, but modified by Wützer, and generally attributed to him. All these methods consisted in pushing up the sac along with a considerable amount of the surrounding tissue; and my belief is that to the want of isolation of the sac, and the consequent drag upon it, many failures in cases at first promising should be attributed.

Some successes were, however, attained. I operated in 1863, by a method substantially that of Wützer, upon a young man who was desirous of entering the U. S. Navy, but was prevented by the fact that he had a right inguino-scrotal hernia. He afterward gained his appointment and three years later was doing duty as a third assistant enginneer, the rupture giving him no trouble. Two other cases, on which I operated in the same way at about the some time, passed out of my observation before the results could be determined. And the risks and uncertainties of all such procedures were then so great that it seemed imprudent to undertake them unless in exceptional instances.

I have already said that the method which I wish now to describe consists essentially in the invagination of the isolated sac. No one feature of it, I believe, is entirely new; but as a whole it has not to my knowledge been proposed by anyone else.

I expose the hernia by a curved incision, describing a semi-circular flap of ample size. This I do also in operating for strangulated hernia, as it carries the cicatrix away from the seat of trouble, which is afterward covered in by sound skin. (I have several times noticed, however, that in the final healing the scar is drawn over so as to form a straight line between its two extremities.)

The sac being laid bare, is isolated from the external ring down to its tip. Sometimes it is better to empty it during this process, which may often be accomplished by tearing with the fingers. Bassini's advice, to begin the isolation at the ring and to proceed downward, is, I think, generally to be followed.

In order to secure control of the empty sac I now pass a silk thread through its wall at either side; the two ends of each are left long, and caught in hœmostatic forceps.

With the forefinger of the left hand the tip of the sac is now inverted and pushed up as far as the internal ring, or as near it as possible.

Next a slightly curved needle, with an eye near the point, and armed with a thoroughly sterilized silk thread, is passed up along the finger as a guide, to be pushed out at one side of the tip through the tendon of the oblique muscle. One end of the thread being caught, the needle is withdrawn slightly, and again pushed through the tendon at the other side of the tip. The other end of the silk thread is now detatched from the needle, which is wholly withdrawn, and the two ends, left slack, are caught together in a hæmostatic forceps.

Now, by means of the two lateral threads, and by grasping in the fingers, the doubled sac is drawn down carefully, and with a small curved needle a fine silk suture is passed through it from side to side from below upward as far as possible, and then from above downward, so that its two ends, when drawn tight, will crumple up the sac into a solid mass. These ends are tied and cut off short.

The lateral threads are now removed, and the other silk thread is drawn up tight, pulling the plug formed of the sac into place at the internal ring; its two ends are tied on the outer surface of the tendon of the external oblique, and cut off short. The skin-flap is laid over in place again, the wound closed by sutures, and the ordinary antiseptic dressings applied.

Until the wound is completely healed the patient is kept in bed. I have not put a truss on any of the patients recently subjected to this operation, but have cautioned them against making any muscular effort likely to bring undue stress

upon the parts until time enough has elapsed for their consolidation.

As to the ultimate results of this operation I have no cases of sufficient duration to enable me to speak positively. A man, aged twenty-two years, operated on October 24th, is present for your examination this evening; he does full work as an orderly at the Pennsylvania Hospital without either truss or discomfort. To my disappointment, a boy, aged twelve years, operated on December 12th, has failed to be here; there is no sign of yielding of the plug, though he is running about as heedlessly as any boy of his age. A man, aged forty-nine years, operated on at the same time, seems also to be completely relieved. On January 10th I operated on a man aged fifty-four years, at St. Joseph's Hospital; he has since had a severe bronchitis, but his hernia seems entirely controlled, and he is now going about freely. Another man, aged thirty-two years, in the Pennsylvania Hospital, operated on January 7th, is still under treatment.

Of four other cases, including the first one, operated on in September, 1890, I will not speak as they passed completely out of my knowledge too early for the results to be determined.

I am well aware that my array of cases is very small, but the first two above mentioned and the fourth afforded pretty severe tests of the efficiency of the closure of the canal. I offer the method as one which seems to me sound in principle and promising well; moreover, in case of its failure, the parts are in condition for the repetition of this procedure or for the adoption of any other that may commend itself.

Of course, there must be an exercise of judgment as to the suitableness of any mode of operation in any given case. I think there would be difficulty in adopting the one now described in cases of congenital hernia; and whenever for any reason the sac must be extensively opened it would have to be carefully sutured before invaginating it. And I believe that it might not answer well if the canal and internal ring were very wide.

DISCUSSION.

DR. KEEN: It seems to me that in some respects Dr. Packard has made a decided improvement in operating for the radical cure. It is directly in the line of recent work in the field of general surgery, which has lately been discussed by Mr. Chiene in a paper on "The Flap Method in Surgery," in which it is shown that the introduction of this method into cerebral surgery by Mr. Victor Horsley was a great improvement. It seems to me, by using this method, that we gain additional strength in the cicatrix.

The proposed method does not seem to me to secure the internal ring as well as a suture applied high up and within the internal ring, so as to close it, which I always do. In the second place there was nothing said about suturing the abdominal wall and without an incision in the abdominal wall it is difficult to locate the internal ring accurately. If this is not closed there will be left a tube beyond the bite of the ligature. There must also be an opening in the belly wall through which the spermatic cord passes, which is not narrowed in this operation, which would permit recurrence of the hernia. The case presented is too recent to permit any conclusion as to the ultimate result, and in the one of four years' standing the result is unknown. I must take exception to Dr. Packard's statement that the Bassini or the Halsted operation is too difficult for most general practitioners. It does not require a good knowledge of anatomy, but unless a man is a good anatomist he should not operate for hernia.

DR. PACKARD: In reply to the first point, with regard to not closing the internal ring, I would say that in many cases the internal ring is reached if the operator pushes his forefinger as far up as he can. I suppose that in some cases where the canal is long one can hardly be perfectly sure that he has reached the end of it. When the ligatures are tightened they draw up the mass which is held in the canal and make just at the internal ring an exceedingly firm plug, which can be felt from the outside for a week or two after the operation and which gradually subsides. This plug fills up the canal, except the lower portion, which is entirely open, and the dimple behind the peritoneum, where the constituents of the cord come out. Of course, there may be a dimple left at the inguinal ring; but, unless one opens the abdomen and operates from within, one cannot be sure that there is a projection instead of a dimple. The only difficulty is in getting the end

of the sac pushed up and suturing it to the internal ring; otherwise it is a very simple operation, and the results have been so far satisfactory. I should be very glad to have it tried by other surgeons.

DR. WHARTON: What is the relation of the plug to the suture?

DR. PACKARD (Making a diagram): If we represent the pillars of the ring, leaving space for the canal, the sac is inverted and pushed up as far as the internal ring, the inverted sac is then stitched to the sides of the ring and by drawing the suture tight the plug is drawn up the canal formed of the sac to the internal ring.

DR. KEEN: If the abdominal wall is not incised as in Halsted and Bassini's operations, but only the finger is inserted in the canal, how can the operator tell, when he introduces the suture and carries the needle backward and forward, that he is closing the canal exactly up to the internal ring?

DR. PACKARD: By pushing his finger well up in the tube, using a Baker Brown needle, and introducing it along his finger to the end of the tube and pushing it out at the side, he can always reach the end of the canal. The suture which is carried backward and forward has nothing to do with the internal ring; it is intended merely to crumple up the doubled sac into a solid mass to constitute the plug.

DR. KEEN: It seems to me that the difficulty is that without splitting the abdominal wall up to the point where he is going to suture, Dr. Packard cannot get his first suture as high as he represents in his diagram, and then he leaves the upper part of the canal open. I would also ask if the plug may not slough? In the Macewen operation, if the hernia be large, the sac may slough, as I have seen in one case. I therefore would not use the Macewen operation for large herniæ.

DR. PACKARD: I agree with Dr. Keen that in large herniæ operation is not advisable; better leave such to a truss than do any operation. Now, to reply to his criticism, I find that when these sutures are applied as described, the mass goes up to the internal ring, or right up to the suture, and remains there. I will not pretend to say that in every case it goes clear to the internal ring; but it does fill the lumen of the canal, and, as stated above, has in several cases withstood severe tests.

W. W. Keen, M.D., presented a paper on the

EXTENSIVE THORACOPLASY BY SCHEDE'S METHOD.

A. K. S., of Blacklick Station, Indiana County, Pa., aged thirty years, was admitted to the Jefferson Hospital, March 11, 1894.

The family history is negative. He had all the usual children's diseases, and four years ago, after a severe attack of enteritis. Twelve years ago, after a severe attack of pneumonia lasting six weeks, left-sided pleurisy set in. Two months later a small incision was made, between the sixth and seventh ribs just to the left of the nipple line, and a drainage-tube was introduced. For fourteen months a small amount of pus escaped through the opening after removal of the drainage-tube. Then the opening was enlarged, and over two quarts of pus was then evacuated in twelve hours. A large drainage tube was then inserted. He immediately began to gain in weight, and says that he gained thirteen pounds in the first fourteen days. His weight had been as low as ninety pounds, though he is six feet tall.

Status præsens: Weight, 145 pounds; appetite good, and he feels very well; no bloody expectoration. Between the sixth and seventh ribs, just to the left of the nipple line is a drainage-tube which he has worn continuously for nearly eleven years. About half an ounce of pus escapes from it in twenty-four hours. Occasionally it is blood-stained, and he has had an even greater amount of blood escape when excited by coughing or by the introduction of a new tube, sometimes losing over a half pint of blood. The whole left chest is much sunken in.

Operation March 14, 1894. A vertical incision was made just outside the line of the nipple, and about two inches of the seventh and eighth ribs were resected, exposing the upper surface of the diaphragm. Starting from the opening in the chest cavity, it was with the greatest possible difficulty that I could resect the ribs, since they were absolutely in contact as the result of the deformity of his chest. The pleura was also over an inch in thickness, which made the thickness of the chest-wall about two inches, and therefore very rigid.

In addition to this the left lung was

firmly bound down and so contracted that there was practically little lung tissue in use. Hence, as his respiration was almost confined to the right lung, I had to watch the ether very carefully, and by the time that I had resected these two ribs it was very evident that the operation should be terminated, and anything further left for a future date.

The wound was packed with iodoform gauze. His highest temperature after the operation was 99.8°. The cavity of the chest was washed out with pyoktanin, boric acid, sublimate solution, etc., at different times.

He left the hospital May 28, 1894, in much better health and with little annoyance from the large cavity remaining in the chest, from which the discharge was comparatively slight. He is to return for a second operation.

Second operation, Jefferson Hospital, June 30, 1894. Examination by a long probe showed that the cavity of the pleura was very large and extended to a level with the clavicle. My intention was to resect as much of the chest-wall as possible. I was obliged to be extremely careful of the anesthetic, as I had been in the previous operation, lest, having a little more than one useful lung, the anesthetic and the operation together might prove fatal. I made a vertical incision from the clavicle to the still-existing opening into the chest cavity, followed by two horizontal incisions at each end of the first. I then dissected the soft parts from the ribs internally to within an inch of the left border of the sternum, and externally to a point an inch posterior to the anterior border of the scapula. Then, guiding a large pair of bone forceps by my finger, and starting from the existing opening, I cut ribs, muscles, pleura vessels and nerves, *i. e.*, the entire thickness of the chest-wall up to and including the second rib, then, starting again from the prior opening outwardly to a point a little in front of the inferior angle of the scapula skirting the upper surface of the diaphragm, then from this point directly upward, and again horizontally on a level with the second rib. Most of this large mass, an account of its thickness, had to be removed piecemeal, part of it in two or three large pieces. The size of the portion removed was approximately eight inches vertically by five inches horizontally. A number of the larger intercostal arteries bled, but were seized with hemostatic forceps, and finally, even without ligation, on the application of very hot water, ceased bleeding. The inner wall of the cavity was found to be enormously thickened visceral pleura and pericardium, stretching like a vertical diaphragm from front to back at a point about an inch external to the left border of the sternum. This was thoroughly curetted and swabbed. The flaps were then laid directly upon the thickened pleura and pericardium and sutured in place. His recovery was without incident, though slow. The reaction was very moderate.

October 6, 1894. He came to the hospital again to-day to see me, and I found the only remnant of the wound was a cavity about as thick as a lead pencil and an inch-and-a quarter deep. With light packing this will soon heal. His chest is very much deformed from falling in of the wall, but the cavity is entirely obliterated. His general health is excellent.

The opening closed entirely about the middle of November, and he is present this evening for your inspection.

REMARKS. The present is by far the most extensive resection of the wall of the thorax that I have ever done. The first operation was particularly preliminary, simply to gain access to the cavity of the pleura, and had to be terminated somewhat abruptly on account of the difficulty of the etherization. The second operation was attended with less difficulty from the anesthetic, and was fully carried out.

The operation which I made I have subsequently found has been described by Schede as a modification of Estlander's operation, or rather, perhaps, in suitable cases as a substitute for it. In the present case Estlander's operation would have been useless, on account of the immensely thickened pleura.

Schede makes a large, semi-circular flap with its base at the second rib, its curve beginning on the front of the thorax and sweeping downward and backward in a larger part of one-half of the thorax. In my own case, the soft parts were dissected from the ribs by a vertical incision with two horizontal incisions at the upper and lower ends of the first, making an L. It seems to be equally satisfactory with that of Schede.

The case with which the operation was

done, and the admirable result, commend it to me very strongly. Nothing less radical would have effected a cure. The vessels were controlled without the slightest difficulty by hemostatic forceps, not even a single one requiring ligation.

His present condition eight months after the second operation, is curious. The thoracic wall, where its entire thickness has been removed, is as firm and resistant as if the ribs had never been removed. This may be due to two causes: First, the tension of the soft parts of the old chest-wall, which stretch like a drum-head from the anterior to the posterior border of the opening I made; second, the thickened pleura and pericardium on the median surface of the old empyemic cavity, furnish a very firm resistant base on which the flap presumably rests. I intentionally use the word "presumably," for on percussion the entire left chest is resonant, and even tympanitic, as if there were a pleural cavity still existing. Were this really the case there would certainly, however, be a considerable amount of pus secreted, and this can scarcely be the fact, in view of the healing of the cavity for so long a time. Moreover, in October last, when I examined him with a probe, no cavity, but only a small sinus existed. The lung can hardly have expanded enough to fill the cavity, for a pleura an inch thick can scarcely have been absorbed to such an extent as to allow of such expansion. The respiratory murmur, however, is heard for a inch external to the left border of the sternum.

The posterior portion of the ribs form a marked projecting ridge near the posterior axillary line. It looks as if the resections were much less extensive than I have described, but this is due to a lateral curvature of the spine to the left, thus making the spinal part of the ribs much more prominent than would otherwise be the case. The movements of the arm are perfectly free, the removal of the greater part of both pectoral muscles having had no restraining effect upon this free shoulder motion.

The apex beat of the heart is in the normal situation.

He has not gained in weight very much, but his general health is excellent.

A few days after he was shown to the Society the wound broke open again and discharged a small quantity of pus. I then did a third operation, removing some more of the chest wall at the upper posterior angle. I found a cavity 3½ inches long and as thick as the thumb. This is now (March 27th) nearly obliterated by granulation tissue. His general health is reëstablished, and he is now, I believe, entirely cured.

De Forest Willard, M.D., presented a paper on the

ADVANTAGES OF AMPUTATION THROUGH THE KNEE-JOINT AND THE AVOIDANCE OF THE TOURNIQUET WHEN THE VESSELS ARE ATHEROMATOUS.

The disadvantages of the use of the tourniquet when the vessels are atheramatous are obvious. The constriction causes not only minute fissures in the walls of the vessels, but it may even fracture them, and in either case it tends to develop arteritis, subsequent loss of vitality in the flaps, and secondary gangrene. At the same time the cases presenting this condition are frequently old and feeble persons who are seriously exhausted by the local condition of gangrene, presenting other evidences of obstructed vessels, and can illy afford any loss of blood.

Gangrene occurs most frequently in the the feet and legs, and for such condition amputation in the neighborhood of the knee-joint or at the thigh, is advisable since, after leg amputations the diseased conditions frequently return.

Amputation through the knee-joint can be performed with less hemorrhage than at any other portion of the limb, since, in the neighborhood of the knee, all the vessels in front are small and can be readily caught with hæmostats as the anterior skin-flap is cut. The tendo-patellæ, the lateral and posterior ligaments can all be divided without serious hemorrhage. We then have the limb hanging by the posterior bridge of soft tissues, which bridge contains the large vessels, and can be easily caught by the fingers of an assistant; in fact, it is now a perfectly simple matter to expose the popliteal artery and to test its pulsation to discover whether it is actually previous, then to expose it just enough to carry around it a bundle of catgut ligatures, four or five, which ligatures are tied just sufficiently tight to bring the

inner coats of the vessels together and not to crush them.

Sometimes the popliteal artery will be found thoroughly plugged, necessitating the working up in the posterior flap for a considerable distance before a previous vessel will be found.

The popliteal having been tied, the flap is firmly grasped to control the smaller arterial branches, and the posterior flap quickly cut of the desired length. The operation is practically bloodless.

Should the artery be impervious, it may necessitate an amputation higher than the joint itself. The tissues now can be pushed back, the periosteum divided above the condyles, and stripped back from the femur to the desired distance without loss of blood and without injury to the soft tissues. The femur is then divided opposite the point of ligation and the wound dressed antiseptically.

By thus stripping back the tissues subperiostically an amputation in the lower third of the thigh can be performed with but little lose of blood and without injury to the vessels by any form of constricting band. It is a plan equally well adapted to traumatic cases with atheromatous vessels.

The knee-joint region should then be the site of election. A broad ligature loosely tied is the best.

DISCUSSION.

DR. L. W. STEINBACH: I thought that it was an accepted method among surgeons not to use the tourniquet in cases of atheroma. While agreeing, therefore, with Dr. Willard, it seems novel that he should call attention to it. I have used the board band of the Esmarch apparatus in amputations of the leg for gangrene. In a recent case I had considerable difficulty in finding contracted vessels, but the patients made a good recovery. In one case I did not even use the precaution of employing the Esmarch, and had the vessels compressed by the fingers of an assistant, and the patient recovered.

DR. WILLARD: The point which I intended to accentuate was that an amputation could be made through the knee-joint without loss of blood, even though no constricting band was used.

H. R. Wharton, M.D., presented a paper on the

INJURIES OF THE LOWER EXTREMITIES REQUIRING AMPUTATION OF THE RIGHT LEG AND EXCISION OF THE LEFT OS CALCIS.

Jos. B., aged fifty-eight years, was admitted to the Methodist Hospital in April, 1894, with an extensive compound comminuted fracture of the bones of the right leg, and a lacerated wound of the sole of the left foot with extensive comminution of the os calcis and separation of the attachment of the tendo Achillis.

The patient had received these injuries while at his work, the band of his trousers being caught upon a shaft which was making 120 revolutions per minute; he was wrapped around the shafting, and at each revolution of the shaft his feet and legs were struck against the wooden joists near the shafting. On examination of the right leg it was found that the foot and lower portion of the leg were completely crushed, and an amputation was made through the middle third of the leg.

Upon examination of the left foot it was found that a flap consisting of part of the sole of the foot and heel, including the plantar fascia, was turned forward, the os calcis was extensively comminuted, and the tendo Achillis was torn loose from its attachment, and its extremity was torn into shreds.

I removed the os calcis completely, and having trimmed off the shreds from the tendo Achillis, sutured it to the posterior portion of the plantar fascia. It was noticed during the operation that all the arteries were very atheromatous.

The patient did well after the operation, and with the exception of a small patch of gangrene which occurred upon one of the flaps of the amputation, and some sloughing of part of the heel of the left foot, which delayed the healing of the wounds, his recovery was uneventful. I present him this evening to show how useful a foot he has, even after excision of the os calcis. You notice that he walks fairly well, and upon removing his shoe you see that he has a fair range of flexion of the foot. The shoe he finds most satisfactory is one in which the inner portion over the heel is supplied with a triangular pad, to take the place of the prominence normally presented by the posterior portion of the os calcis.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES

For January. Drs. Bernard E. Vaughn and Henry T. Brooks make a

Preliminary Report on the Study of the Gonococcus.

A condensed history of the study of this organism in its relation to gonorrhœa is given. The development is restricted and the virulence destroyed by the use of alkaline culture medium. The temperature best suited to the growth is 36° C. It will not grow below 25° C., nor above 40° C., and the cultures retain their vitality from four to six weeks if prevented from drying, while gonorrhœal pus has been kept moist and found virulent after seventy-one days. It is not very susceptible to chemical germicides. In some instances observers have inoculated patients about to die with pure cultures and in the recorded cases this attempt was unsuccessful when high fever was present—otherwise gonorrhœal urethritis developed.

In Finger's report of the only recorded autopsy on a case of acute gonorrhœa (produced in this way) the flat epithelium of the fossa navicularis was covered by pus corpuscles and these were also in the interstices between the cells, but the cells themselves were practically undisturbed. Elsewhere the cylindrical epithelium was displaced and the deeper transitional cells were infiltrated by pus cells. Wherever a follicle caused a break in the epithelium the inflammation was more intense and extended deeper, and the intensity of inflammation was directly proportional to the nearness to a follicle. The sinuses of Morgagni and the ducts of Littre's glands were found plugged by masses of pus corpuscles. The gonococci were found on the surface only of the squamous epithelium but penetrated pus corpuscles and also the cylindrical epithelial cells and the connective tissue.

All cases applying for treatment for urethritis were microscopically examined as follows: Pus was collected on a glass slide directly from the meatus; a second slide was drawn over the first to uniformly distribute the matter, and both were dried.

The following solution: concentrated alcoholic solution of methylene blue, 30 c.c., solution of potassium hydrate, 1-1000,100 c.c., was now applied by a pipette and then washed off in water, and the specimen dried over a flame. Examination was made with a one-twelfth oil immersion lens without cover glass.

The appearance coincides with the description of Finger: a diplococcus each half of which resembles a coffee bean, having a straight and curved border, the two halves lying so that the straight edges almost coincide, a small slit only intervening. These differ from other diplocci in being found in groups, never in chains, the number of individuals in each group being divisable usually by four.

JOURNAL OF NERVOUS AND MENTAL DISEASE.

for February. Dr. Morton Prince discusses

Traumatism as a Cause of Locomotor Ataxia.

A number of instances are given in which traumatism, more or less severe, appeared to be the cause of locomotor ataxia; but in none of which it could be proven the cause after a careful review of the history of the patient.

In order to recognize traumatism as the cause in a given case it is necessary to show:

First. That the patient immediately before or immediately after the injury was free from locomotor ataxia.

Second. The subject must be shown to have never had syphilis or been exposed to other well-known causes. One authority claims that ninety per cent. of all cases are due to syphilis.

Third. The traumatism must have produced a physical or psychical impression of greater extent than individuals frequently suffer without pronounced ill effects.

Fourth. The symptoms must have appeared within a reasonable time after the receipt of the injury. The author limits this time to one year.

Fifth. There must be no reasonable doubt as to the diagnosis.

Reviewing such published cases as he had access to the reports of the author was able to find only three or four which were not open to serious objection under one head or another of the table just quoted. Even in these few the absolute proof of absence of disease of the spinal cord immediately before or immediately after the accident is wanting.

It is well known that in cases of unmistakable syphilitic disease of the nervous system it is frequently impossible to get any history of such infection, and the author is disposed to think that at best traumatism simply draws the attention to a disease which may have existed, unrecognized, for some time previously, or perhaps even causes an exacerbation in such cases.

ALIENIST AND NEUROLOGIST.

Dr. James G. Kiernan writes of the

Evidence of Sanity in Criminal Cases.

A number of points for consideration are presented, some of which have been lost sight of, or else denied by experts in criminal cases, the result being a decision not in accord with the opinion of the author. Five propositions are given as follows:

First. Criminal acts committed by the insane often originate in logical motives.

Second. Acts committed by the insane for insane reasons are often referred to logical motives.

Third Acts committed by the insane may be the distant outcome of an insane delusion, yet the act be the result of a logical, seemingly sane motive.

Fourth. The execution of decidedly insane projects may be interfered with by a healthy conception.

Fifth. An insane man committing homicide for insane reasons may take due precautions to preserve his life for the execution of delusional projects.

Very interesting cases are cited showing clearly the full meaning of each of these propositions, and also how exceedingly apt a jury would be to judge an insane man sane if he acted in certain ways, which, on the contrary, would decide an expert's opinion in the opposite direction.

The same journal quotes from the *Gazz. degli Osped* the report of the cure of two cases of progressive paralysis by causing subcutaneous abscesses along the spine by means of irritating hypodermics. Mention was made at the same time of the cure of a case after an attack of typhoid fever, and of two cases by attacks of small-pox. One of the attacks of this latter disease had been intentionally produced.

From the *College and Clinical Record* Dr. T. J. Mays is quoted as stating that strychnine in increasing doses (1-32 grain gradually raised to ¼ grain, or more, four times daily) exerts a favorable influence on all of the symptoms of pulmonary phthisis. This is regarded as further evidence that this disease is due in great part to faulty pulmonary innervation.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

The Importance of Early Diagnosis of Chronic Kidney Disease.

(Benjamin Wilson, N. Y. State Med. Rep.) Albuminuria has ceased to be considered decisive as to renal lesions, and, when the only evidence, is not to be accepted as conclusive. It may be present when serious lesions are absent, or absent when continned lesions are manifest.

Every disease of the kidneys does not give rise to albuminuria, but the persistence of albumin in urine is indicative of a pathological condition in some part of the body.

Urinary casts are ranked among the surest signs of kidney disease. They are always to be regarded with the greatest suspicion, yet they may occur under numerous conditions, where the causes may only be temporary. The hyaline or mucous cast, while ever significant as the exudation cast described as the waxy or amyloid. The former is suggestive of nephritis in some stage, while the latter is proof positive of chronic degeneration.

Anuria and polyuria are important guides when they can be dissevered from a mental or bodily condition of a temporary nature capable of producing either.

To summarize:

Albumin is inconstant and bears no relation to the extent of the lesion, but when present should be respected as a prominent factor in diagnosis, making its appearance after other well-marked syptoms have existed; the disease is grave when albumin is present in pathological quantities and associated with casts.

Neither the absolute total quantity of the urine passed daily, or its percentage amount gives us much help in the diagnosis of renal disease. But toward prognosis there is no information more valuable than that of a prolonged series of urea analyses, to anticipate a dangerous accumulation in the system.

The literature of Bright's disease in its protean form is voluminous, and yet the knowledge of the subject is very imperfect, confused and unsatisfactory. The pathological anatomy of inflammation of the kidneys is the most extensively studied, but at the same time the least finished chapter in medical science.

How Long is Syphilis Contagious?

In a paper upon this question, published in the *Jour. Am. Med. Asso* , Dr. J. D. Thomas maintains that "Syphilis, being purely an inoculable disease, when the zymotic period has exhausted itself the patient is no longer capable of conveying or transmitting the disease.

"All zymotic diseases have a pretty uniform history of invasion, period of acme and period of decline. Syphilis is not an exception to this rule. Let us take, for instance, diphtheria. Six months after the disappearance of the active stage the patient may be suffering with paralysis. The paralysis is not diphtheria; the condition is not a contagious one; it is a sequel. No one has the temerity to assert that a person who has had scarlatina or small-pox continues to carry about, for months, in his system, the germs of these diseases, although the one disease may cause, for an unlimited time, a suppurative otitis and the other a necrosed maxilla.

Why should not the same reasoning hold good with regard to syphilis? Why should such a large number of the profession still hold to the idea that the sequelar lesions of syphilis are contagious? But recently I heard a gentleman make a statement to a medical society that he had treated a patient for syphilis ten years before the patient's marriage, and that after the marriage the patient infected his young wife. To me the statement was absurd. I did not deny the contagion, but did the source. The belief by some that the contagious character of syphilis persists for decades is an error due to faulty observation or to a lack of observation. Without entering any further into polemics, I make the assertion, in language more forcible than elegant, that patients may be rotten with the sequelar lesions of syphilis and at the same time indulge in intercourse and procreate off spring, without conveying the disease to the one or transmitting it to the other."

In corroboration of this opinion, five carefully observed cases from the author's notebook were presented—two bearing upon the hereditary feature of syphilis, and two others which proved the clinical fact that they were infected, not by the husband, but by fresher syphilitics. The conclusion arrived at was, "that syphilis can only be conveyed during the primary and secondary stages, and that the secondary stage ends not later than the third or fourth year from date of infection. . . . The chaotic views held by many of the profession in regard to the contagious period of syphilis are due to the acceptance upon their part of the word of the patient. We should not, and can not afford to base scientific axioms upon statements made by members of the laity. These statements are often studied deceptions; at other times they are honestly given, but from different premises."

Pain and Sleep.

It is certain that pain is one of the best antidotes to sleep. It may vary in intensity from a grumbling toothache to the sharp darting pains of neuralgia. It often follows that even after the pain is relieved the nervous system of the patient has received such a shock that sleep is impossible. Opium will quiet the pain but in many persons it has the affect to produce a condition of extreme wakefulness. Then again in persons who have been working for a long time under great mental pressure, we have a sleepless condition which contra-indicates the employment of any form of opium. In this condition the overworked nervous system is very likely to manifest itself in aches and pains of a neuralgic character. Therefore we find brain workers subject to a most annoying and obstinate insomnia. For all of these conditions we know of no better combination than the tablet composed of phenacetine and sulfonal. The phenacetine will control the pain whether it be of the severest character or only some slight neuralgic twinge; while the sulfonal is a hypnotic of a positive and fixed value. So far as we know attention has not been called heretofore to this particular combination. The therapeutics of each of the drugs mentioned will at once indicate a number of conditions where it can be used to the best advantage.

Diagnostic Importance of Enlargement of the Cutaneous Veins at the Lowermost part of the Thorax.

Dr. W. Hirschloff calls attention to the high diagnostic value of these venous dilatations. Affections of the lungs, heart, serous membranes surrounding these organs, mediastinal diseases and those of the great vessels will give rise to such signs. They are in general due to two causes—hindrance to the venous return to the heart and development of collateral circulation. As the veins of the anterior thorax empty into the superior vena cava through the internal mammary, the intercostal veins and the brachio cephalic trunks, a compression of these vessels would cause a consequent enlargement of the cutaneous veins Compression is generally caused by primary or metastatic new growths of the mediastinal space; lymphomata, lymphosarcomata, substernal strumous growths, or pulmonary neoplasms, aortic aneurisms or enlarged bronchial glands. Often the dilated veins are the first signs of intra-thoracic disease. Another very frequent cause of extensive venous nets forming on the thorax is a preceding contraction of the pleura or pericardium after preceding inflammation of these membranes, frequently occurring years before. This may cause nearly complete obliteration of the greater vessels and even death. Venous dilatations developing in the course of a few hours are dependent upon thrombosis of either the jugular, subclavicular or anonymous veins. As this more frequently is observed on the left side, the corresponding enlargment will be observed on this side. Dilatations from mere mechanical pressure sometimes give rise to very extensive enlargement, even of the size of one's finger, as in a case observed by the writer, where from capillary dilatation the arterial pulse was transmitted into these veins so as to cause them to resemble arteries. Yet on deep expiration, this pulsation would cease and the vessels be overfilled. In some cases thrombosis of these veins has been noticed. There is still another form of dilated veins, at the lower portions of the thorax especially. The vessels are prettily arranged in a branched and dendritic manner along the border of the lowest rib. They are dependent upon defective muscular action in this portion of the chest in respiration; they are liable to be quiet pronounced in four-fifths of emphysematic patients.—*Deutsche Medizinische Wochenschrift*, New York *Medical Times*.

Hemorrhage in Pregnancy.

Cases are by no means rare where slight hemorrhage, or something resembling menstrual flux, occurs at the time for the regular catamenial period for the first two months of

pregnancy, and in some cases extends during the entire period. This condition does not necessarily indicate placenta prævia, for where that exists Playfair says the hemorrhage rarely begins before the end of the sixth month, and sometimes not till labor has commenced. Depaul, in 70 cases, says in 1 case only the hemorrhage occurred before the sixth month; in 7 from six to seven months; in 12 from seven to eight months; in 26 from eight to nine months; and in 24 at term or near. A month before actual labor it is not unusual for slight pains, resembling labor pains, to occur at regular intervals, even with the slight appearance of blood. Of course in these cases the strictest rest should be enjoined and, if necessary some remedy used to check the pain.—*N. Y. Med. Times.*

Inflammation of the Middle Ear of Infants.

Dr. A. Hartman (*Deutsche med. Wochenschrift*) gives the results of investigations of this subject in the Institute of Infectious Diseases, Berlin:

1. Post-mortem examinations and examinations of the ears of living children establish the fact that 75 per cent. suffer from inflammation of the middle ear.

2. Inflammation of the middle ear can nearly always be determined by an otoscopic examination.

3. The symptoms of the otitis media consists of restlessness, elevation of temperature and loss of weight. Sometimes these symptoms are not present.

4. Very often the symptoms of otitis media are connected with broncho-pneumonic processes. Probably both processes are due to the same process, viz., aspiration.

5. Death can result in cases of otitis media, slow stone atrophy, or from an extension of the micro-organism into the cranial cavity (meningitis), or into the blood (septicemia).

6. The inflammation of the middle ears of infants must receive treatment suitable for the varying conditions.

Abortive Treatment of Gonorrhœa by Permanganate of Potash.

Large injections of permanganate of potash methodically used is the best method of treatment yet introduced. Its advantages are, being absolutely painless in cases of anterior urethritis, and scarcely painful in cases of inflammation of the whole tract; it can be commenced or left off without inconvenience; it has no detrimental action on the mucous membrane, but suppresses every trace of discharge from the first lavage, and is successful about eleven times out of fifteen. The size of the injection, and its frequency and strength, must be adapted to individual cases. Generally, strengths of 1 to 4,000, or 1 to 2,000, or even 1 to 1,000, are tolerated.—*Times and Register.*

Relation of Gastro-Intestinal Affections of Female Genital Organs.

Theilhaber (*Munch. Med. Woch.*—*Boston Medical and Surgical Journal*) gives details of forty-five patients who had been sent to him for gynecological examination by Dr. Cramer, a specialist for diseases of the stomach and intestines. They all suffered from stomach disorders, twenty-five with nervous dyspepsia, twelve with atony of the stomach, two with catarrh of the stomach, two with chronic intestinal catarrh, and four with other affections.

The gynecological examination revealed absence of any abnormality in four cases; in nineteen, catharrhal endometritis, with more less thickening of the parenchyma of the uterus; in four, endometritis hemorrhagica; ten cases of retroflexion and version of the uterus; three of oophoritis; two of parametritis; one of old puerperal parametritis; one of retroversion of the anteflexed uterus; and one of small ovarian tumor.

As regards the connection between the gynecological troubles and the stomach and bowel affections, Theilhaber divides the cases into three groups. The first embraces those cases in which the gynecological condition is only a chance occurrence. In the second group belong those cases in which the gynecological disturbances are caused by the gastro-intestinal affection; Theilhaber mentions here especially cases in which metrorrhagia and dysmenorrhœa are caused by constipation. In the third group the uterine condition is the cause of the stomach trouble.

Six of the patients with nervous dyspepsia suffered from retroflexion; in four of these the dyspepsia was cured by the reposition of the uterus; in two, not. Nervous dyspepsia and endometritis hemorrhagica existed in three cases, In two the digestive difficulties, which had existed for years, disappeared after curetting; one patient withdrew herself from treatment.

Of eleven cases of nervous dyspepsia and catarrhal endometritis, local treatment of the uterus had prompt effect in eight. Four cases of atony of the stomach which were associated with various local conditions were cured coincidently with the cure of the uterine conditions. Theilhaber concludes from his observations that in all cases of nervous dyspepsia, atony of the bowels or of the stomach, hyperacidity, want of acidity, and periodical gastralgia, in women where for a long time a rational medicinal treatment has not been successful, a thorough gynecological examination should be made, especially when the patients complain of menstrual irregularities or of leucorrhœa. Still, though the gynecological treatment is important, it is often necessary that treatment of the stomach trouble should be also carried out.

The Value of Diphtheraia Antitoxin.

The discussion on the value of the diphtheria at the Berlin Medical Society, was concluded at the third session of the society. Dr. Schiemmann warned general practitioners against employing the antitoxin, which he said should be left to the hospitals for the present. Professor O. Liebreich, director of the Pharmacological Institute of the University, criticised the published serum statis-

tics. He said that the Berlin hospitals had always had a much higher percentage of deaths from diphtheria than the Berlin town practice. This was because, broadly speaking, only serious cases were brought to the hospitals. But since the introduction of the serum treatment a far greater number of cases—and cases of all sorts—had been brought to the hospitals, and so it was quite natural that the percentage of deaths had fallen considerably. He considered the serum treatment to be based on fallacies very similar to those which had formed the foundation of the tuberculin treatment. It would be interesting to find out, he added, what action on the organism injection of pure indifferent serum would have. Dr. Hansemann, in a few last words, stood to his view that antitoxin is not to be regarded as a specific for diphtheria.

SURGERY.

Concerning Aristol in Surgery.

"Iodoform is that toxic compound of iodine and sulphur, which, though employed as an antiseptic may any time poison our patients; and anyone who knows anything about bacteriology is aware that it possesses no antiseptic power, whatever, though all must admit that in tuberculous or syphilitic sores it exerts a most marvelous stimulating power in the process of repair.

"After iodoform comes aristol, a drug which is more efficacious than the former and without its dangerous lethal properties. Under all circumstances it is to be preferred to iodoform when a deodorizer and antiseptic is called for.

"Aristol is devoid of any offensive odors of iodoform, and in light applications over wounded surfaces, forms an impervious scab or shield under which healing rapidly advances. It certainly is the most valuable dry powder we have in our possession at present for many lesions of the periphery.

"Aristol is of an immeuse value in the treatment of burns, having a remarkable influence for the relief of pain. It occupies a high place as a cicatrisant and antiseptic. It may be used dry, as an ointment, or combined with benzoinol.

"Aristol is of great value in malignant tumors, especially during the stage of ulceration, and may even be used internally for cancer of the stomach.

"In prescribing aristol in ointments a little ether should be rubbed with the drug before mixing with the base. This gives a much finer division than is usually found."
—Ed. *Times and Register.*

Treatment of Fracture of the Clavicle by Suture.

Routier (*Rev. d'Orthopedie*) is strongly in favor of suturing in certain cases of fracture of the leg, with the aim either of facilitating reduction which cannot be effected by ordinary means, or of maintaining reduction when it would be otherwise impossible or difficult to keep the fragments in good position. In cases of simple fracture of the clavicle, on the other hand, he would in general trust to bandaging, as a slight deformity, due to a moderate deposit of callus, would be less objectionable than the scar left after the application of the suture. The author would not hesitate, however, to treat fracture of the clavacle by an open operation in any case in which there might be a risk of much subsequent swelling and serious deformity; and, also, whenever it might be found impossible by ordinary means to overcome such displacement as would not only be unsightly, but also influence very seriously the innervation of the upper extremity. Exposure of the seat of fracture under such circumstances would enable the surgeon to place the broken surfaces in apposition, the application of a suture not being necessary unless it be found difficult to keep the fragments in place. A case is reported of fractured clavicle with extreme deformity due to over-riding of fragments in a female patient, aged twenty-two, which was successfuly treated by exposure of the seat of injury, removal of a detached fragment of bone, and suturing of the two main fragments of the broken clavicle. Three weeks after the operation there was perfect union. The linear cicatrix was small and hardly perceptible, the shoulders were symmetrical, and the patient seemed to be free from the least trace of deformity.

Resection of the Entire Left Lobe of the Liver.

Professor E. Tricomi reports the case of a man, aged 27, in which he extirpated the entire lobe of the liver for adenoma originating in the bile ducts. After resection of the ensiform appendix and division of the ligament. coronar. and triangular., as well as of the rectus, that portion of the viscus containing the tumor was drawn without the abdominal wound, which was sutured. The neoplasm was compressed by means of elastic tubing and metal loop, and necrosis brought about. On the eighteeth day, after application of a segmented suture above the ligature, the tumor was separated with the knife; cicatrization occurred on the ninety-sixth day.— *Wien. med. Presse.*

Resection of the Lower Jaw.

Moty presented two cases, in which he resected one-half of the lower jaw, to the Paris Society of Surgery.

M. Berger remarked, in discussing the cases, that, notwithstanding that it has been regarded as an inevitable consequence of this operation that the remaining part of the jaw becomes deviated toward the resected side, in these two cases this distortion did not exist. This demonstrated that the immediate application of appliances to prevent this occurrence is not indispensable.

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ORIGINAL ARTICLES.

SCORBUTUS IN INFANCY.

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Cases of scurvy in infancy and childhood are of such rare occurrence that, hitherto, but comparatively few cases of this affection have been reported. However, it is well described by Thomas Barlow in Keating's *Cyclopædia of the Diseases of Children*. This author gives to Dr. Ingersloe the credit of having been the first among the continental physicians to recognize and report a case of this disease. (*Virchow's Jahresbiruht*, 1873, p. 697), and to Dr. W. B. Cheadle the credit of being the first English physician to show on clinical grounds the relations of this affection to the adult type of scorbutus. But to Dr. Barlow himself belongs the great credit of having shown the anatomical characteristics of the disease as determined by post-mortem examinations. Dr. Wm. B. Northrup (*Archives of Pædiatrics*, Jan. 1892), reported two cases which came under his own personal observation, and also reported fully several other cases which he had collected.

The pathology of this affection is still one of the unsolved mysteries of medicine. However, one thing has been definitely proven beyond a doubt, and that is that the primary cause of the changes which occur is improper feeding.

As yet microscopical examinations have revealed nothing, but it must be inferred that the blood vessels undergo some change, in order to allow the blood to extravasate through their walls. Up to the present time, no culture experiments have been made in order to determine the presence or absence of a special bacterium.

The anatomical lesions reported by Dr. Barlow have been corroborated by Drs. Northrup, Stephen, Mackenzie and several others; the lesions are as follows:—Blood extravasations between the actively growing periosteum and the subjacent bone, which is considered the primary scorbutic bone change. These extravasations are best seen in the legs and thighs. There may be a more or less complete sheath of blood clot between the separated periosteum and the shaft of the bone; the bone may undergo atrophy from pressure to the extent of fracturing at the slightest violence, when this unfortunate accident occurs it is generally above the juncture of the shaft with the epiphysis, but it may also take place in the middle of the shaft. These anatomical changes occur more frequently in the bones of the lower extremities than in the upper, but no bone in the body is exempt, for the ribs, the scapulæ and the bones of the skull may be involved; the eye has been known to bulge forward (proptosis) from extravasation between the periosteum and the orbital plate of the skull. Hemorrhages may also be found in many of the internal organs.

The distress and suffering in this infan-

tile form of scurvy is easy of explanation when we view the hemorrhagic extravasations between the bone and the periosteum. In the adult the effusion of blood generally takes place into the muscles and cellular tissue, giving rise to the well-known brawny indurations, and is therefore attended with far less suffering.

The symptoms in the beginning of this disease, are usually not well marked. Perhaps the only thing noticed at first, is the fretful cry on being picked up. Very soon the attendants will notice that the legs, if the trouble be in the lower limbs, will be held perfectly immobile. This condition may go on to pseudo-paralysis. If the disease be not checked, the tenderness and pain on handling become excessive; the skin appears shining and tense without any local rise in temperature. When the swelling goes down the prominent thickening of the shaft. will be noticed upon palpation. In rare cases this bone affection will be more marked in the upper than in the lower extremities, especially at the lower end of the radius. When teeth are present there will usually be swelling and bleeding of the surrounding gum, which may be so swollen as to protrude from the mouth. However when the teeth have not yet been cut this condition will be absent. On the surface of the body there may be ecchymotic spots, varying in size from pin points to quite large bruises; or there may be a roscola present. These spots are also occasionally seen on the mucous membranes. Hæmaturia, hæmoglobinuria, bleeding from mucous membranes and profuse sweating of the head are all conditions which may be present.

The treatment in such cases must be strictly hygienic; plenty of fresh air; fixation of the affected limbs; wet compresses will often relieve the pain. The diet must be strictly regulated. Raw milk but slightly diluted, raw beef juice, orange juice, lemonade, mashed potatoes, boiled cabbage and stewed tomatoes. Medicines are of far less importance; ergot and the dilute acids being the only drugs that possess any value. Under this treatment the most hopeless cases will often show signs of improvement.

The differential diagnosis of this affection will not be difficult to those who have once seen a case, or even to those who bear in mind that such a disease does exist. Where mistaken diagnoses have been made, it has been ascertained that the disease had been mistaken for either rheumatism or inherited syphilis; and these are probably the only two affections with which it could possibly be confounded.

The case which came under my observation is that of a baby, born in this country of an American mother and a Scotch father. The father is a very strong, robust man, but the mother is rather a delicate, fragile woman, who passed through several severe illnesses before the birth of the child. The mother's history is as follows: In August, 1891, she was seized with an attack of typhoid fever, which lasted two months. In November of the same year, just as she was considering herself comparatively well, she was taken sick with la grippe, which lasted fully six weeks. It assumed the gastro-intestinal form and she really seemed to be passing through another attack of typhoid fever, only that her temperature did not seem quite so high. During her convalescence, she suffered from acute melancholia. However, complete change of scene and surroundings restored her to her normal mental condition, although her health was still far below its usual standard. Upon her return home in February, 1892, she conceived, and in November of the same year she gave birth to a male child, which was much below the usual size of her babies. In April, 1893, the mother had another acute attack of melancholia. It was then deemed advisable to wean the baby and to send her away again.

The child was put upon Fairchild's peptogenic milk powder, and great care was exercised in the use of the bottles and milk. However, as the hot weather came on, the baby developed a chronic gastro-enteritis which lasted the whole summer. Some days the child did not get anything but egg-water, barley water and a little mutton broth. The milk was digested for half an hour generally, and was given whenever the stomach could tolerate it. Several weeks spent at Atlantic City effected no change in its condition. It was only as the summer began to wane that its state began to improve. On October 15, 1893, at the request of the father, he was vaccinated, and this was done upon the left leg. On the 27th of the same month I was sent for and found

him covered with a roseola which I paid no farther attention to, attributing it to the vaccination. A few days later, while I was attending one of the other children, the mother told me the baby was so cross and fretful he would cry on being picked up, and that he couldn't bear to have his legs touched. The vaccination scabs were examined and it was noticed that they were surrounded by a dark purple areola. However, the pain was still attributed to the vaccination and the mother told not to worry; that he would probably be all right in a little while. On November 10, the mother became alarmed and I was again sent for. She told me it had been impossible to bathe him for several days, as handling seemed to cause him to scream, and even when he was not touched he kept moaning constantly. I found the following condition: rose-red punctate spots scattered over the trunk, the vaccination scabs were nearly off and blood was oozing where separation had commenced, they were still surrounded by a large purple area; the upper and lower incisors, which were the only teeth through, were surrounded by slightly swollen purple gums, and, the roof of the mouth was filled with bluish spots. The napkins were stained a dark brown by the urine, showing the presence of hemoglobinuria. A hard laryngeal cough which was present was attributed to slight hemorrhages into the mucous membrane of the larynx. The rectal temperature was 106° F. In no recorded case has the temperature been noted so high. It generally ranges from 100° to 102° if present at all. The legs were held in a perfectly immobile position; the lower end of the femoræ and the upper part of the tibiæ were found very much thickened. He screamed when the arms were grasped. The characteristic beading of the ribs was present, as was also profuse headsweating.

The condition being now fully recognized, he was put upon the appropriate treatment, although some misgivings were entertained as to the final result on account of the high temperature and the extreme suffering which was present. The treatment consisted in cold sponging; wet compresses around the legs and thighs; the administration of dilute sulphuric acid and ergot in drop doses. The peptogenic milk powder was stopped and in its stead plain raw milk, raw beef juice, lemon and orange juice were given. During convalescence cabbage, potatoes and tomatoes were given.

After a few days the temperature gradually fell to normal and the symptoms began to ameliorate, so that in about one week after treatment had been instituted he could again be comfortably handled, although it took several weeks for the shafts of the bones to become normal.

After the vaccination scabs came off, slight oozing continued from the raw surfaces for several days. What relation vaccination had, if any, to the scorbutic condition it would be impossible from our present knowledge to state, although some cases of purpura following vaccination have been reported.

In England, where there are more proprietary baby foods sold than in any other country, the disease is not so rare.

In Germany some of the most eminent physicians have never seen a case.

This baby had been on milk and water, equal parts, to which cream and the peptogenic milk powder had been added. The milk was sterlized and perhaps the child's condition may have been due to this. He has developed into quite a sturdy little lad, although last summer he had another prolonged attack of gastro enteritis.

Bleeding at the Nose.

Dr. Kohn (*Northwestern Lanset*, condensed from *Medical Record*) suggests the following as a scientific and rational plan of dealing with all cases of nosebleed:—The patient is to sit quietly with the head thrown slightly back. All tight clothing about the neck or chest is to be loosened. Breathing through the nose is to be entirely suspended as well as all attempts at clearing the nose or throat. The patient then is told to breathe rapidly through the mouth; say thirty times a minute until he is tired, sounding a broad "A" with each expiration so as to shut off the posterior nares from the throat by bringing the soft palate against the posterior wall of the pharynx. These manœuvres place the nose at rest by stopping the passage of air through it, diminish the flow of blood to the head by the rapid respiration which determines the flow of blood to the lungs, and shuts off the posterior nares. They are simple measures, and if not successful prepare the way for the next step of insufflation of tannin or astringents, followed if necessary by plugging the nostrils.

REMOVAL OF THE DISEASED OSSICLES IN NON-SUPPURATIVE OR CHRONIC MIDDLE-EAR INFLAMMATION.

LAURENCE TURNBULL,* PH.G., M.D., PHILADELPHIA.

The operation in non-suppurative or chronic middle-ear inflammation has received the term "Otosclerectomy" from the Greek for ear and hardness or excision, or from the surgical removal of sclerosed and anchylosed conductors to sound. Now and then we meet with cases of failures in the hands of our best surgeons, even in carefully diagnosed and selected operations, to relieve deafness, vertigo, etc. "To err is human," and in our experience of many years practice of the profession, we have witnessed some errors and have received authentic reports of sad results from others; and not only do these occur in the hands of the tyro, but in those of professors and hospital surgeons of our cities.

In properly selected cases of non-suppurative or chronic middle-ear inflammation our success has been good. When we find a patient with an obstruction anywhere between the thickening and adhesions of the membrana tympani, anchylosis of the malleus, of the incus, but not the same condition of the stapes, we consider it safe to operate. It is almost always necessary to perform a preliminary operation by opening up the drum membrane or resecting the malleus or incus, removing a section of the diseased bone and diseased tissue. When we find this preliminary operation improves the hearing, or relieves the tinnitus and vertigo, it is not always necessary to complete the operation if the hearing is satisfactory.

In some rare cases this operation will sometimes check even progressive sclerosis, by making a long incision in the membrana tympani posterior to the malleus, and to use traction on the incudo-stapedial joint. If these are not effectual in removing the annoying symptoms then it will be safe to resort to the full operation, *i.e.*, excision of the membrana tympani and ossicles. In our hands cases with a dreadful feeling of pressure, which were seen at the aural clinic of the Jefferson Medical College, have experienced much relief of a permanent character by opening the drum and removing the malleus. On examination there has been found diseased bony structure without giving any other indication on its surface; we have found similar disease in the mastoid region, where in two cases an opening was found in the bone large enough to admit the tip of the forefinger. We never, as yet, have known of a death from the operation of removal of the diseased ossicles; never have heard of a chronic discharge following an operation, or of mastoid or other complications, but cases have been reported where the hearing power and tinnitus have been made worse.

A case of death was reported in the *Medical Bulletin* for November, 1894, p. 448. Desiring further information on the subject I addressed a letter to the gentleman who reported the case and the following is his reply:

"My patient's statement, as near as I can remember, was that her friend's hearing had been improved by the operations (three, I think) performed. It became necessary, however, after the lady had gone to Washington, D. C., on her way to her home in the South, to have an opening made behind the ear, by a physician of that city whose name I could not ascertain. This latter operation it was stated was soon followed by death, the patient having in the meantime become nearly blind.

"My informer was of course unable to say as to the exact nature of the operations done in Philadelphia, and although I knew the operator fairly well, I did not feel at liberty to ask him under the circumstances any questions as regards the matter. He is a man who, although he is not connected at the present time with

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any medical colleges, has had considerable experience in intra-tympanic surgery. I am under the impression that the case was similar to one reported by Dr. Randall, in which mastoid disease requiring operative interference, was followed by intratympanic operation, which was probably due to displacement of the incus backward into the aditus or antrum, in the effort to remove it.

"I am sorry that I am not able to obtain more definite information as regards this interesting case. My patient could not tell me whether her friend had had any discharge from her ear previous to going to Washington, and she left Philadelphia apparently in good health."

The death was probably due to the tympanic operation as the primary cause. The fact that she left Philadelphia in apparent good health indicates that something quite unusual must have occurred, and it is quite possible that the operation was performed in a suppurative case with the hope of relieving an existing mastoid irritation or empyema, which, however failed in its object, and the more formidable operation therefore became necessary. Should this view prove to be correct then the surgeon was perfectly justifiable in the course he pursued and I should regard his conservative action as highly commendable.

Cases accompanied with atrophy or paralysis of the auditory nerve should not be operated upon. Again great care should be taken not to injure the Fallopian canal with the incus hook.

Children can be operated upon, and even old men have had great relief from the tinnitus and vertigo. As a matter of course the older the individual the less chance of restoration to good hearing.

We are all liable to accidents in so limited a space as we have to operate, yet much can be done to prevent them by great care in our manipulations. The use of antisepsis, a good electric light, and a proper clip for a lens on the back of the forehead mirror, is necessary for presbyopes.

The following are the indications where it is of benefit to use the operation upon the drum head and ossicles in otitis media chronica:

1. Deafness.—This has been improved but not in all cases. This is the writer's experience in cases of which he has positive knowledge.

2. Tinnitus and vertigo.—In this a larger number are relieved. The vertigo is not relieved in all cases by the operation, especially if there has been a true disease of the nerve, but it may be if there be only Meniere's symptoms with no change of the semi-circular canals, cochlea or brain.

After a few days careful preparation we employ cocaine or ether as the anesthetic. We illuminate the ear by the electric headlight. My method of operation has been modified after that of Dr. Sexton of New York, the pioneer in this operation in the United States, and we give his method first.

The technique of the operation in cases where the membrana tympani is not perforated. First make an incision behind the short process of the malleus, continuing it by means of a probe-pointed knife if the perforation is not large enough to permit withdrawal of the malleus. While the incus is held in position by its attachment to the malleus in front and by a short process behind, the long process may be seized by the forceps, and the entire bonelet withdrawn. With a curved two-edged tenotome, then, sever the tendon of the tensor tympani muscle by cutting upwards behind the short process of the malleus. With a probe-pointed knife or a curved sharp incisor sweep about the entire periphery, seize the malleus at or about the short process and withdraw the malleus and membrana tympani attached to it. Hemorrhage is gently mopped with baked or iodoform five per cent. cotton, and the meatus stopped with the same for twenty-four hours. The patient should remain in bed and in the house or hospital for five days. Use the iodoform cotton for stopping the ear. All sudden movements of the head or anything having a tendency to produce congestion should be avoided. If suppuration or mucous discharge occur use iodoform cotton. If the membrana tympani reform it must be torn down.

The indications for the operation are; first, rigidity from ankylosis in the ossicular canal; second, great impairment of the function of the drum (tympanum) as a result of catarrhal, acute or non-suppurative inflammation; third, where there is a very great relaxation of the transmitting

mechanism, giving rise to severe autophonic noises, vertigo, etc. The drum head is detached in the upper part by an incision so as to uncover the incudostapedial articulation. This is usually accompanied by a loud and distinct "click," and leaves the detached end of the incus—sometimes the incus is not seen and it must not be groped after—a bent probe is generally passed over its surface and some of its envelope detached. It is then brought down with the forceps, tight traction being made. The remaining attachment of the drum head should then be separated with the knife and together with the malleus removed.

THE MOBILIZATION AND EXTRACTION OF THE STAPES.

This operation was first proposed by Ricardo Botey (Berlin Congress, 1890), and modified and performed by Miot and Boucheron. An incision was made on the outer periphery and the stapes was extracted by a Palet hook. Kessel and Botey employed extraction through the fenestra ovalis in anchylosed and fixed stapes. Still later, L. Jack reported sixteen cases; five for chronic middle-ear catarrh and eleven for suppurative catarrh, in which there was a remarkable improvement in a number of cases. Then we have the synechotomy or section of the stapes suggested by Schwartze.

The most recent report on the removal of the stapes is by Clarence J. Blake, Boston, who states that he has found that the continuance of the cut, from the front just posterior to the short process of the malleus downward towards the posterior border of the manubrium, resulted in a turning of the flap outward in such a manner as to interfere with the accuracy of the alignment. The incision procedure was divided into two part—the first consisting in the opening already described, beginning at the round window 2 mm. in length, and following the periphery to the short process of the malleus; the second beginning posteriorly to and half way down the length of the manubrium and being carried upward to meet the termination of the first cut. He obtains most wonderful results from the use of a two per cent. solution of cocaine, applied on a cotton tipped probe, both in checking bleeding and pain. In this paper he reports four cases.

The first, a young woman of twenty-two years, with a chronic catarrhal inflammation of both middle ears. Prior to the operation, Politzer's acoumeter was heard at a distance of two inches, and the tuning fork (512 V.S.) aerially 10-65. The voice was heard only when spoken close to the ear. Two weeks after the operation the acoumeter was heard at a distance of twenty-six inches; the tuning fork aerially 15-65, by bone conduction 20-65; the voice in a moderate tone, heard at a distance of one foot, and the exploded consonants T, P, B, and D, were confounded.

The second case was a man of twenty-six years of age, in excellent general health, who had been deaf in his right ear since childhood, in consequence of suppurative inflammation of the middle ear which had resulted not only in the destruction of the membrana tympani, but with the loss of the two ossicles. Tests of the hearing—Neither the medium fork (512 V.S.) nor the large Politzer forks were heard at a distance of one inch from the ear; the larger fork giving only a jarring sensation, in the left ear the fork was heard. On the left, a Galton whistle was heard only in the lower numbering of the register. Two weeks after the operation there was no vertigo; the Galton whistle was heard throughout its whole scale, the tuning fork (512 V.S.) was heard aerially 26-65; the bone conduction on the mastoid at 40-65, but the hearing of the voice was not improved.

The third case was a man of fifty years of age, with progressive chronic catarrh. Before the operation the hearing, both for the acoumeter and the tuning fork (512 V.S.) was unappreciable. One week after the operation the hearing, both aerially and by bone conduction, was the same as before the operation.

The fourth case, Mrs. A. R., aged fifty-six years. In this case a two per cent. solution of cocaine was employed and yet there was pain. Hearing distance before the operation, by tuning fork 25-65 in the right, and 13-65 on the left. Eighteen days after, tuning fork 24-65, and the voice in a loud tone heard at a distance of three feet.

Neuralgia.

Antipyrin	5 iss
Caffeine	5 as
Ext. cannabis Ind, Ext. aconite, Hyoscyami hydrobromat. (āā)	gr. iiss.
	gr. ½

M. et ft. caps. no. xxx. Sig.—Ons every two or three hours.

SURGICAL TREATMENT OF HEMORRHOIDS.

S. D. VAN METER, M.D., DENVER, COL.

It is my desire, in writing a paper on this subject, not only to summarize the evidence in proof that, in the majority of cases, the oldest surgical operation for this trouble—that of ligature—is the best, safest and surest, but to make an earnest attempt to explain why the quacks have such a hold on this branch of surgical science. I say oldest, for Hippocrates mentions its use, and, since his day, while the technique of operation is most likely improved, no better method for the cure of hemorrhoids has been discovered.

To-day no branch of surgery is more in the hands of charlatans than rectal diseases in general, and especially does the quack make capital of "painless cure of piles;" "without the use of knife or detention from business." When one knows that a case of hemorrhoids, in the hands of any competent surgeon, can be cured by a safe and simple operation, and is confronted with the fact that the ubiquitous pile doctors are reaping immense fortunes from the many sufferers from this disease, he most naturally ponders the question, "Why such should be."

Most things have a cause in this world, although 'tis often extremely difficult to reason back from effect to cause. In many instances where the explanation is hard and authorities differ, the cause is a combination of many minor causes. This I believe to be true in many instances.

First of all, so many general practitioners are apt to give their patients who consult them for rectal trouble (be it anything from cancer down to eczema) palliative treatment. Many cases they fail to examine, taking the diagnosis of the patient, which in most instances is "piles," missing thereby case after case demanding operation, which, if they had examined and diagnosed, could have had the proper attention. But, after using some anodyne or palliative remedy with, perhaps, temporary relief, one of these patients soon finds himself in as bad a shape as ever. Seeking relief, he steers his boat elsewhere; perhaps he falls into honest hands, but when a ship is afloat without a rudder no one will say to what point she will drift. When the fiendish "pile" doctors swarm in every harbor and are stationed on every out-post, flaunting in the face of all sufferers their enticing circulars written in every line with an appeal to the weak spots of human nature, is it surprising they should secure so many of these cases that are drifting in search of relief? No! And who is to blame? We cannot stop these charlatans in their diabolical work, but an appeal to men in general practice to be more careful with rectal cases, and thereby keep them out of the long grasping reach of the quacks, if heeded, should do good.

The natural timidity of the human race to undergo anything that suggests an operation drives many cases from the honest surgeon to the quack, who guarantees a cure "without knife or detention from business." It is hard to change human nature, but frank and plain explanation of what can and should be done by operation often dispels timidity and makes cowards brave. I have seen patients who are perfectly willing to have the ligature operation performed when told that no knife was to be used, all the cutting necessary being done with scissors, whereas, when they thought a knife would be required, they would not consent. Another factor that works in the interest of the pile doctor is the fact that many people are so very sensitive about having anything wrong with their rectum that they often prefer passing by their family physician and surgeons of personal acquaintance, to consult some obscure "orificialist," simply because by so doing they do not feel that hyper-sensitiveness. Yet, what do they sacrifice for such gratification!

There are other minor causes for the immense hold that charlatanism has on rectal surgery but those mentioned, viz., (1) the laxity of the profession in managing these cases, (2) the alluring schemes of the quacks, (3) the natural timidity of the human race to undergo any operation, and (4) hyper-sensitiveness of many individu-

als when affected with any rectal disease, are chief and those to be attacked by the profession if this branch of surgery, wherein so much good can be done, is to be wrested from the mire of charlatanry.

All of you know much of the ways and workings of the "rectal pocket cutters," "orificial surgeons" and "osteopathy" (the derivation and meaning of the latter, the Omniscient only knows), but unless you have by personal observation seen some of their diabolical work, you can but in a small degree imagine what these vampires are capable of doing. A case which came under my observation not long since is a fair example: One of Denver's most worthy gentlemen, suffering solely from over-work and mental strain, went East for recreation and change of scene. For further satisfaction he consulted one of New York's leading physicians who reassured him his case was a break-down from over-work with some dyspeptic trouble of slight importance, and that what he needed was rest and quiet. With this reassurance, he turned his course westward, intending to stop at quiet resorts taking the journey by easy stages, that thereby he could get the much needed rest of body and mind. At Chicago he was allured to that outwardly attractive institution, Pratt's Sanitarium. Here he entered with but one purpose, that of being retired from the noisy and busy world. Not the least thought did he have of submitting to an operation of any kind, and certainly not on his rectum, never having suffered the least trouble with that organ. This man, of strong mind and determination of purpose equalled by few, had not been in the "spider's parlor" forty-eight hours before the fiend who runs that institution had by his wily tongue and, you might say, hypnotic power, performed Whitehead's operation on his rectum, telling him, of course, of the pockets, little piles, etc., but that all he was going to do was to stretch his rectum. Yet, it was well known that this organ was practically normal. After this bloody operation, and especially in a patient of a generally weakened constitution, it is not surprising that retention of urine followed. Finding it impossible to pass a catheter without, the patient was anesthetized, and after an hour or more of endeavor, a catheter was finally forced into the bladder. Much hemorrhage followed as well as a violent cystitis, which came near ending in death. As soon as possible this gentleman left that infamous, misnamed sanitarium with its beautiful flowers, park, lake and drives, but not until he had paid $1,000 for the operation and $75 per week for room and board. Fortunately the operation healed by first intention. The cystitis yielded after persistent treatment, but, of course, his bladder condition of to-day is not what it was before the operation.

If this gentleman of exceptionally strong mind, full of business and determination, could be hoodwinked and robbed of health and money by one of these impostors, what must be the crime daily practiced upon those easily led, and, apparently willing to be duped? Preposterous! Beyond conception save by those who have seen it. 'Tis folly to reach these fiends through the law, and in a measure we are helpless, but repeated exposure of their deeds will be of great benefit.

They do not stop at telling the suffering invalid that an operation on his rectum will cure any disease there, but encompass all ailments that human flesh is heir to, claiming the fulgurant pains of tabes dorsalis and other similarly incurable symptoms will fade away like a snow bank before a summer's sun. One thing, however, that is most gratifying is that most of these men hail from the ranks of the followers of Hahnemann. Consequently, gentlemen, permit me to urge you who are not, to be careful how you manage your rectal cases. Don't be satisfied with palliative treatment when you find patients requiring operation. The majority of cases of diseases of rectum do not have to be sent to anyone making a specialty of such work. Select your cases of hemorrhoids suitable for operation; operate, and I am sure you will profit thereby and save many a poor sufferer from the misfortune of falling into the hands of quacks. If you do not care to operate on cases suitable, don't be contented with palliative treatment, but send them to someone who will perform the radical operation.

I am aware that there are men present who take issue with me and believe they can cure a great number of cases of hemorrhoids without resorting to operative procedure; but, gentlemen, while I admit there are a few cases which may be called hemorrhoids which can be relieved not to return by palliative treatment, I think

they are exceedingly rare, and I maintain that, *when hemorrhoids are well developed, nothing short of their removal will effect a permanent cure.* If the gentlemen will secure a full history to date of the cases they believe they have cured, and cancel from their list those who have gone elsewhere for treatment and those still affected, the remaining cases, I believe, will be exceedingly few.

Do not, however, understand me to advocate that every patient presenting himself for treatment who is afflicted with hemorrhoids should, immediately and forthwith, be operated upon. Far from it. But it is a fact worth remembering that the size of a hemorrhoid, in most cases, does not govern one in deciding whether or no an operation is to be performed. Surgical judgment alone can decide when an individual case requires operation. But, I do believe, when a suitable case presents itself, a doctor is doing that which is not right if he administers palliative treatment, when so simple, safe and sure an operation as that by ligature exists, and by which nearly every, if not all, cases of hemorrhoids can be permanently cured.

Passing over the dietetic, hygienic and palliative treatment when required, neither of which must be ignored in treating hemorrhoids, the question arises: What method recommends itself when we find a case requiring operation?

I believe there are twelve or thirteen recognized operations for the cure of hemorrhoids, all of which have the same purpose—that of removal of the tumors. Of these it is needless to mention but four—(1) injection, (2) Whitehead's operation, (3) clamp and cautery and (4) by ligature.

The injection method—the one chiefly used by the itinerant pile doctors—at one time bid fair to become popular, but its inefficiency, danger of death and other accidents, such as thrombus, ulceration and pyæmia, have justly brought down upon this method the condemnation of all men of standing and authority. The statistics gathered by Andrews are enough to make anyone look upon it as a bad operation and regard it as an unscientific and unsurgical procedure. Andrews' statistics show, out of 3,304 cases, deaths, 13; embolism of liver, 8; sudden and dangerous prostration, 1; abscess of liver, 1; dangerous hemorrhage, 10; permanent impotence, 1; stricture of rectum, 2; violent pain, 83; carbolic acid poisoning, 1; failure to cure, 19; severe inflammation, 10; sloughing and other accidents, 35. True, these statistics are from cases operated upon by unskilled men, but likewise are they from men prone to give the best reports possible, and, taking all things into consideration, one must, from these facts and the experience of men who have honestly tried this method, conclude that it is to be condemned as unworthy of a place among surgical operations.

Whitehead's operation—that chosen by the "orificial surgeons"—likewise cannot receive too strong condemnation. In brief, it consists of removal of the lower segment of the mucous membrane of the rectum, the so-called "pile-bearing area," and stitching together the cut edges of skin and mucous membrane by interrupted sutures. This bloody, dangerous and tedious operation can only be recommended in exceedingly rare and selected cases, and in these I prefer another. If union does not take place by first intention, the result is disastrous and the danger of septicæmia, unmanageable ulceration and consequent stricture is very great.

The operation by clamp and cautery, which just now is being revived, has some points to recommend it, but aside from cases where there is great relaxation with redundancy of tissue, I cannot see how it has any advantages over the operation by ligature, but it has objections not possessed by the ligation method, and I propose to consider them together. No operator, be he ever so skilled, can say when the cautery has completely sealed all blood vessels. The danger of secondary hemorrhage I believe to be greater than when the ligature is used. When the amount of pain a small burn causes is taken into consideration, no one can maintain that operation by cautery is painless. While with the true internal variety this question does not arise in the majority of pile operations, one is compelled to take in tissue supplied by the sensory nerves, and, when he does, most certainly the pain after cauterization is far greater than that after a clean cut. Then, the cautery method requires cumbersome or costly apparatus, which often gets out of fix when needed, and the mere suggestion of a hot iron is remindful of most unpleasant memories.

As the operation by ligature is simple, requiring but a few instruments; is safe, being almost void of danger; sure, because it successfully removes and cures the hemorrhoids, it is deserving of the commendation justly awarded it by the many eminent authorities on rectal surgery.

Allingham says: "I do not think in the whole range of surgery there is any procedure worthy the name of operation which can show a greater amount of success or smaller death rate than the ligature of internal hemorrhoids." Bushe, Bodenhamer, Ashton, Van Buren, Cooper, Brodie and Syme never lost a case. Gross, in such expressive language, said: "The operation by ligature is as simple of execution as it is free from danger and certain in its results."

Matthews, in summarizing the results in 1,000 cases, certainly gives strong evidence in favor of ligature. Not in a single case did he have to operate the second time. Such a consensus of opinion ought to be sufficient proof of the superiority of the ligature method over all other operations.

I have intentionally made no classification of the varieties of hemorrhoids, simply because I believe there is but one practical division, viz., internal and external, with a combination of the two. Further classification is useless, confusing and misleading: likewise is the elaborate technique of operation, given by many authorities, more than is necessary.

Preparation for two days prior to operation, by a saline the second, and a purgative pill the night previous, followed by warm enema the morning of operation, is the best preparatory treatment.

After anesthetization, the patient is placed in Sims or the lithotomy position, according to the preference of the operator. The parts are cleansed and irrigated with some antiseptic solution. I prefer 1-5000 bichloride of mercury. The sphincters then are slowly and gently dilated with one of the many bivalve speculums. After this, the two thumbs are placed in rectum, palmar surfaces outward, and the dilatation is completed until you feel a gentle relaxation, not a rupture of the sphincters. This generally brings all hemorrhoids into view, but, if not, by grasping one of those in sight, and with a little downward traction, all that are hidden will usually be easily seen.

With a stout ligature and vulsellum, the smaller tumors are picked up and firmly ligated. Larger ones are transfixed with double thread, tied above and below, and the major part cut off with straight scissors. If, however, as is true in most cases of large hemorrhoids, the lower covering of the tumor approaches or is composed of the skin, a sulcus, including any immediate redundancy of the integument, must be cut and the lower ligature tied therein. The dissection of this sulcus should be carried up sufficiently high that no branches of the sensory nerves will be included in the ligature, or else there will be much more pain. The white line of Hilton I believe to be a most unreliable landmark and often impossible to locate.

As to the external variety, it has been my experience that the best method to deal with them is to make a clean excision of each and every one. Any hemorrhage that may follow can be controlled, and if it is feared, after making the incision of the integument, a ligature may be the integument, a ligature may be used. The practice of removing a part of the larger piles, expecting the subsequent contraction to obliterate the stumps and the smaller tumors, I believe to be a mistake. A clean excision of all is the best. Small, insignificant tumors often take on inflammatory action and become worse than those removed, thus requiring a second operation. Acute inflammation of external piles in no way contraindicates operative procedure. Their removal is the quickest and best way to "reduce their inflammation," as many men think should be done prior to operative procedure.

After attending to all hemorrhoids according to this plan, dusting the parts with iodoform and returning the ligated tumors with a piece of gauze into the rectum, and placing a good compress of cotton over the anus, retained by a "T" bandage, the patient is ready for bed. Free use of morphine for the first few days, to control pain and prevent movement of bowels, is administered. Retention of urine must be expected in many cases, and must be cared for.

With a gentle purgative on the sixth to eighth day, aided by an enema, the ligated

tumors generally come away, leaving healthy ulcerating bases, which kindly heal. Cleansing the rectum with an occasional enema of cold water or weak mercuric solution, I think, hastens the convalescence. No matter how desirous a patient is of getting out, to guarantee success the prone position must be insisted upon until the healing is complete. In brief, a free and full removal by knife and ligature is the most satisfactory method of dealing with hemorrhoids. The fear of taking away so much mucous membrane as to cause consequent stricture is unfounded and has caused many failures to cure by the operator not taking away enough.

A better, safer, simpler and surer operation and one you can promise so much relief from, does not exist.

COMMUNICATIONS.

CEREBRAL PALSIES OF CHILDHOOD—REPORT OF SIX CASES.*

THEODORE DILLER, M.D., PITTSBURG.

Inasmuch as I have been unable to learn of any paper read before the society on the subject of cerebral palsies of childhood, I venture to present to you to-night the clinical records of seven cases, together with some observations on the disease.

The cerebral palsies of childhood are not very uncommon. They are, I fear, often unrecognized. The clinical features are, however, well known. On the subject of pathology (excepting of the birth palsies) very little is definitely known; and, as an almost inevitable consequence, numerous speculations and various conflicting theories abound. Among those who have critically studied this interesting subject, several of our countrymen deserve mention, especially Sachs, Osler, McNutt, Peterson, Dana, Knapp and Fisher, as having made careful and laborious studies. Of the foreign writers who have helped us to a better understanding of the subjects, Gaudard, Gowers, Henoch, Strumpell and Wallenberg deserve mention.

Complied from the writings of these authorities, I venture to submit the following brief outline of the affection, against which the cases I am about to relate may be measured. I have no autopsies, and so am unable to contribute anything to our knowledge of the morbid anatomy of the subject.

The very name, cerebral palsies, indicates our lack of knowledge as to the pathology and morbid anatomy. It signifies only that the palsy is one of childhood, and is cerebral in origin; and it is well, I think, that this name should be retained until we shall have gained a far better knowledge of the underlying pathological changes which produce these symptoms. The name polioencephalitis, suggested by Strumpell, and which carries with it the idea that these palsies are due to inflammation of the large motor cells in the cerebrum similar to that which takes place in poliomyelitis, has been very generally rejected as based upon too meagre and unsatisfactory evidence.

These palsies may be divided into those which are congenital, or occur just at birth, and those which occur in infancy and early childhood. The first named (often called birth palsies) occur usually in the form of diplegias and paraplegias; and are frequently, but not always, due to meningeal hemorrhages; while the latter occur in the form of hemiplegias, as a rule, and the morbid anatomy is variable, and indeed, enigmatical.

These two types may be most advantageously studied separately.

Diplegia or paraplegia results most frequently, as proven by the careful studies

* Read before the Allegheny County Medical Society, February 19, 1895.

of Sara McNutt,[1] from meningeal hemorrhages. In many of these cases the labor is prolonged, the pelvis contracted, the head large, or the instruments have been used. In short, parturition has been difficult. Congenital agenesis and parencephalus account for a few cases. Asphyxia (blue baby), with convulsions at birth, have been frequently noted.

This form of paralysis is an exception to the rule that paraplegia is usually of spinal origin. Until comparatively recently these cases were looked upon as spinal in origin. Why cases of birth palsies should be so very generally bilateral, has never been to me satisfactorily explained.

Aside from the convulsions which occur at the time of birth, no symptoms may be noted until the time arrives when the child should begin to creep or walk. Then it is noticed that there is loss of power in the legs, and perhaps in arms too. As months go by this paralysis becomes very apparent. The lack of mental development and power of speech too become noticeable. Convulsions frequently occur. Finally the child's condition is one in which there is a spastic paraplegia or diplegia, a mental condition approaching or akin to idiocy, and epileptic convulsions. Not rarely there are athetoid or choreiform movements or tremors.

Hemiplegia occurs, according to Dana[2] rather more frequently in males than in females; while according to Gowers[3], and Osler[4], the reverse is true. Most cases set in before the end of the second year. They are rare after the fifth year. In one-half of four hundred and twenty-eight cases collected by Osler[5] the disease began with convulsions, so that this symptom is a very important one. This convulsion is generally unilateral (Gowers). A number of cases set in during or upon the subsidence of an acute infectious fever, such as scarlet fever, whooping cough, pneumonia, measles, or mumps. There is frequently some febrile disturbance for several days at the onset. In a few cases the paralysis comes on gradually, without initial symptoms which attract attention. After the onset the paralysis generally improves (in a few cases almost or entirely disappears) in varying degrees, but the characteristic hemiplegic gait is usually present; stiffness with contraction of flexor and adductor muscles, appears—the so-called spastic symptoms. If hemiplegia be right-sided, aphasia may be noted. In time, more or less difference in the size of the limbs on the two sides becomes apparent, and in some cases grows to be extreme. This is not so much due to acutal atrophy, but rather to the trophic changes which leave the affected members in a more or less stationary condition; while the sound side, so to speak, grows away from it. With advancing growth, various forms of talipes are apt to appear, due to the over-action of certain groups of muscles.

Convulsions have a strong tendency to recur, and may do so with every degree of frequency (according to Sachs[6] about 45 per cent. of cases are epileptic); but, even when they do recur, there is usually a comparatively long period of exemption between the initial attack and the one which next appears, often of several months', and sometimes of three or four years' duration. Mental defects are usually observed after the acute onset, or when the child has become old enough for them to become manifest. Along with them, moral defect or perversion is often seen. The moral perversion may be much more apparent than the mental; indeed, may seem to exist in the absence of it, although I doubt if it really ever does. The mental deficiency is seen in all degrees, from extreme idiocy up to a condition of minor mental defect, which is scarcely appreciable. Rarely is mental deficiency entirely absent. In about one-fourth of the cases some posthemiplegic movement, either tremor, chorea, or athetosis is observed.

Morbid Anatomy. Autopsies which have been made, throw light only upon the secondary changes which occur. Sclerosis with atrophy and parencephalus (so called true and acquired), are the conditions found most frequently. In a few cases, embolism, thrombosis, and hemorrhage have been found. What is the primary change which causes such acute and violent symptoms as we see in the onset of this affection? This question

1 Amer. Jour. Med. Sc., Jan., 1885.
2 Text Book of Nervous Diseases. P. 365.
3. Diseases of the Nervous System Vol. 2, p 457.
4. American Text Book of Theory and Practice of Medicine. Vol. 1.
5. P. 706, Op. Cit.
6. New York Medical Journal, 1891.

cannot be satisfactorily answered to-day. But it seems likely that the symptoms are produced by several causes; among others, hemorrhage, embolism, thrombosis and meningo-encephalitis. Gowers[1] believes that thrombosis of cerebral veins and sinuses is the cause of the trouble in a certain number of these cases, arguing that it is well known that thrombosis of veins does occur in children, and that sclerosis and parencephalus, secondary changes, may be explained on the supposition of such an antecedent condition. "It is a known consequence of such general diseases as frequently precede the cerebral lesion" (Gowers). The lack and need of definite knowledge of the morbid anatomy has been well emphasized by Osler.[2]

The diagnosis of birth palsies is not difficult. Paraplegia or diplegia with contractures, increase of reflexes, and the mental state described, starting from no definite period after birth, are enough data by which to recognize it. If there are convulsions and asphyxia at the time of birth, the diagnosis is rendered still more certain; and the lesion is, according to McNutt[3], Osler[4], Sachs[5] and Gowers[6], meningeal hemorrhage.

The hemiplegic form is likewise easily distinguished by sudden onset (often during or after fever), convulsions, spasm, contractures, increase of reflexes without immediate atrophy, or electrical changes; thus forming a contrast to the spinal palsies where there is absence of rigidity, and of exaggerated reflexes; and where atrophy occurs rapidly, and the electrical reactions of degeneration are found early.

Prognosis. Complete recovery is scarcely possible, although a certain number of these cases reach adult age and are able to earn a livelihood in useful occupations. The presence of mental and moral defects, together with epilepsy, render the prognosis very bad. From the paralysis alone there is often improvement, especially in the leg. Athetosis or other post-hemiplegic movements augur badly. They are exceedingly difficult to overcome, and will often persist even when paralysis improves. The prognosis in the diplegic and paraplegic is much worse than in the hemiplegic cases. Many of them get into institutions and die before reaching adult age. It should ever be borne in mind that convulsions in children may be the signal of an oncoming cerebral palsy; and this should lead us to watch all convulsions in children closely, and to be very guarded in our prognosis. It must certainly be a humiliation to say a convulsion is trifling, that it comes from "worms," or the "stomach," or "teething," and find a complete hemiplegia follow it.

Treatment must be symptomatic. Chloral, bromides, or chloroform, may be given if the child is seen in the convulsive stage. Afterwards earnest and systematic efforts are to be made to educate the child. There is a great tendency, naturally, for parents to indulge the little cripple, and thus exaggerate the mental and moral defects or perversions. From time to time, systematic courses of massage and electricity are advisable. The ordinary remedies are to be employed to combat the epilepsy. The various forms of talipes, when severe, may be treated by the orthopœdic surgeon, and sometimes accomplish much.

Lannelongue's operation of linear craniectomy, which has been so much discussed in the journals recently, and trephining have been recommended in some of these cases. When the secondary anatomical changes are considered, it is difficult to see how any good could result from operative measures. Yet I would advise them in certain cases where the epileptic attacks are frequent and the mental condition hopeless. Improvement, (of course, not cure) has followed the operation. If it offers even a small chance in an otherwise hopeless condition, it is justifiable. That if done, it is an empirical operation, is no valid argument against it. Are not many of our best remedies used empirically?

Starr's[1] analysis of twenty-three cases operated upon shows that improvement has resulted in nine cases, and that eight have died from the operation. The mortality is high, but the number of cases improved should encourage us to make further attempts. Unfortunately the pathological condition present in a given case cannot be predicted. With a growing knowledge of the morbid anatomy, we

1 Diseases of the Nervous System. Vol 2, P. 461.
2 Op. cit. P. 707.
3. American Jour. Med. Sciences, Jan., 1885.
4. Cerebral Palsis of Childhood.
5. Jr. Nervous and Mental Diseases, 1880.
6. Op. Cit.

1. New York Medical Record, Jan. 23, 1894.

may hope to more carefully select cases for operation in the future.

Physicians attending obstetrical cases should always bear in mind the possibility of meningeal hemorrhages in protacted, difficult, and instrumental labors. Certainly many of these cases are caused by difficult parturition. Yet in a given case of diplegia where forceps have been used to deliver the head, the physician should never express the opinion that the paralysis was caused by them, as he can never be certain; and may, in doing so, cast reflections upon some competent and wholly unblameworthy professional brother, and thus do him grave injustice.

Case 1. (Referred to me by Dr. Strœssley, of Allegheny, June 6, 1894). F. C., boy, eight years of age. Has healthy parents, and brothers and sisters. Mother had no difficulty at the time of his birth. When eight months old, and when teething, he was, for the first time in his life, seized with convulsions, lasting, with short intermissions, for three or four days. Prior to this time his health had been excellent. Up to the age of four years he had, according to his mother, a convulsion every time he cut a tooth. From four to six he was free from them. At six they returned, and have recurred every two or three months since. They are sometimes general, but oftener the movements are confined to the left side. He is sometimes conscious throughout a spell. He did not begin to walk until the age of four, when left-sided paralysis was very apparent. This has improved very much during the last four years, but is still apparent. The fingers are spastic. He was four years old before he began to talk. Even now he expresses his ideas in "baby talk," *e.g.*, "Me not let oo do," etc. The growth of his moral nature was greatly perverted and retarded. He exhibits lack of inhibitory development—often is cruel to animals and playmates; very imperfectly understands that it is wrong to cause pain or distress in others. When punished for acts of cruelty, he does not understand the reason for such punishment. He is easily diverted or amused by some trifle. He eats voraciously—often bolts food and then vomits afterwards.

Measurements at corresponding points.	Right.	Left.
	Arm—7½ in.	8 in.
	Leg—10½ in.	11 in.

This boy was treated by the ordinary remedies, efforts being specially made to direct his moral and mental training. No benefit resulted. I advised linear craniectomy, after carefully explaining the possible effects of the operation, but the parents decided against it. The boy was afterwards sent to the Elwyn institution for feeble minded children.

Case 2. (Sent to me by her physician from West Virginia, Sept. 25, 1893.) A. G., aged five years. Healthy parents, brothers and sisters. In the midst of perfect health, at the age of two years, she was seized with a left-sided convulsion which lasted four and one-half hours, following which she was unable to walk because of a left-sided paralysis, which became apparent upon the cessation of the convulsion. One month ago she was seized with a second convulsion, but it is not known whether it was general or not. There had been great improvement in the paralysis up to the time of this second fit, which fortunately was not followed by a relapse. But immediately after it, much moral perversion was noted, greatly to the chagrin of the parents, who are conscientious Christian people. At times she will kick, scream, spit and swear, with little or no provocation, The first day she was brought to my office she fought, screamed, and struck at her father viciously, all because she was vexed at some trifle.

Examination. There is no appreciable speech or mental defect. There is left-sided spastic hemiplegia—child walks with a decided limp, but quite well considering the motor impairment. There is spasm, and contractures of the arm, with athetoid movements of the fingers. Any attempts at fine movements of the fingers brings on a spasm which renders the hand quite useless. Ordinarily she does not attempt to use the right hand.

The parents had become over-indulgent with the child on account of her infirmity. A systematic and somewhat rigid course of mental and moral discipline was recommended and carried out, and resulted in much benefit to the child. Massage and electricity distinctly improved the nutrition of the affected side; and, to an appreciable extent, overcame the paralysis. The spasm and athetosis remained, being scarcely affected by the treatment.

Case 3. (Referred to me for opinion November 8, 1894, by Dr. Sowash, of

Irwin, Pa). Girl, five years of age. Born in a very severe and prolonged instrumental labor. She was paralyzed on right side since birth; and this palsy became noticeable gradually when she began to try to learn to walk. During the past six months the child has been seized with a number of "spells," during which she was momentarily paralyzed. Very recently she has fallen in several of these attacks. There have never been any convulsive movements.

Examination. Some, but not marked, mental defects. Distinct loss of power in right side—much more marked in arm than in leg. There are contractions at elbow, wrist and fingers. Flexes fingers; but cannot, at will, extend them, because of spasm. Athetoid movements in fingers. She cannot grasp small objects.

Measurements of limbs at corresponding points were as follows:

Calf, R.—7⅛ inches.	Thigh, R.—11 inches.
Calf, L.—7¾ inches.	Thigh, L.—12 inches.
Forearm, R.—5¾ in.	Upper arm. R.—5¾ in.
Forearm, L.—6¼ in.	Upper arm, L.—6 in.

No perversity of morals. Eats and sleeps well.

This case, apparently a birth palsy, is, contrary to the rule, a hemiplegic, and not a diplegic or a paraplegic.

I have advised careful, systematic education and occasional courses of massage and electricity. A six-weeks' course of Fowler's solution was also recommended.

Only a few days ago I received a letter from Dr. Sowash saying that there had been considerable improvement.

Case 4. (Referred to me by Dr. Dean, November 29, 1893.) Boy, aged fourteen. While teething he was paralyzed on left side. In 1888, when nine years old, he began to have epileptic seizures. These occurred first about every six or eight weeks. He now takes, and has for some months past, six or eight seizures a month. Usually two fits come close together. By far the greater number come on at night. He has light (*petit*), and severe (*grand*) attacks. During the light seizures, the left side only is affected, and he does not lose consciousness. The severe attacks do not differ from those of ordinary essential epilepsy.

Examination. Left arm and leg considably wasted, the former much more than the latter. No athetosis. Contractures not marked. He is dull, heavy mentally, presenting the picture commonly seen in essential epilepsy.

Anti-epileptic treatment resulted in considerably reducing the frequency of the fits. He was advised to use the paralytic arm as much as possible; and the mother was directed to employ systematic home discipline, and warned against over-indulging him. I fear little can be accomplished in the way of overcoming the paralysis or mental deficiency.

Case 5. (Referred to me by Dr. Jos. Dickson, November 15, 1894.) Girl, aged six. Parents healthy. One sister eight, and another four years old, in good health. Mother had no trouble in any of her confinements. Child in excellent health until time of present trouble.

September 1st last, she complained for two hours of very severe headache, following which she was seized with a convulsion lasting four and one half hours, during which consciousness was lost. The movements were confined to the right side, and were more severe in arm than leg. They left her suddenly and perfect consciousness returned. For twenty-four hours following this convulsion her eyes were strongly drawn to the left—the side of the lesion. During this time she did not sleep. In taking up the child in her arms twelve hours later, the mother noticed that the right side was flaccid—powerless. The power of speech, too, was absolutely gone. Only after five weeks did she begin to say a word. Three days later the right arm "drew up," flexed at elbow and wrist. There was spasm, or tetanic movement, lasting a few minutes at a time, for forty-eight hours. At the same time there were slight movements in right leg—flexed great toe. These leg movements were trifling compared with those in arm. Child screamed at each contraction of arm. Was conscious throughout the forty-eight hours. Immediately upon the cessation of these spasms, she went into a sound sleep—seemed comatose. This lasted five hours, and during it, hair was wet with sweat. Seemed very weak after this. Then she began to improve in general health, and has continued to do so up to the present time. To-day the mother says that the health of the child is as good, or better than it ever was. No convulsive seizures since the attacks described. The paralysis, after remaining

flaccid for two weeks, began to disappear, and slight contractures became noticeable. She has steadily gained in power and tone ever since.

Examination.—In general appearance a bright and healthy child. Some paralysis and contractures in right arm, which is flexed at elbow and wrist. Athetoid movements in fingers. Cannot voluntarily extend fingers or wrist. No evident moral or mental perversion. Power of speech limited to the utterance of the words "Mae," "A," "E," "Dummy," says these words perfectly. Does not use inarticulate sounds.

What anatomical change occurred on September 1st which would adequately account for the severe headache followed by right-sided convulsions, leaving the convulsed members paralyzed and power of speech abolished? Evidently it was an acute process. Embolism and hemorrhage, as we see them in the adult, produce very different symptoms. Would not meningeal hemorrhage, or meningoencephalitis, or both, most plausibly account for these symptoms?

The case is a typical one, and in many ways the most interesting one of this series.

The prognosis is, I believe, in view of the rapid recovery which has already taken place, good; *i. e.*, as these cases go. The complete aphasia, especially from the fact of its long continuance, is an interesting feature. As a rule, this symptom usually passes away very soon. Gowers[1] states that it rarely lasts a month or two. In this case it has, with slight improvement, persisted eleven weeks.

Systematic education, a course of massage and electricity and quinine and arsenic were advised.

Case 6. Girl[2], aged twenty-one, was in the midst of a fever of some sort when six years old, when she was suddenly seized with right hemiplegia. Her condition at present is as follows: Marked diminution in size of right arm and leg; hemiplegic gait; arm practically useless; athetoid movements in fingers. Singularly, there is no rigidity or contractures on the paralyzed side. She has two or three epileptic seizures each year. Mental condition fairly good.

Treatment in a case like this is almost hopeless.

1 Op. Cit., 457.

2 This case was exhibited before this society June 19, 1894. and was published in Pittsburg Medical Review of July, 1894, p. 219.

Case 7. (Referred to me by Dr. T. C. Christie, December 23, 1894). Girl, aged three years. Non-instrumental delivery. Mother in labor eighteen hours. Baby born "blue." Thirty-six hours after birth she was seized with a convulsion lasting with short intermissions nearly a whole day. Parents cannot remember whether it was one-sided or general.

A second convulsion occurred at the age of fourteen months. Since then, they have recurred every few weeks, always beginning on the right side. Sometimes the movements are confined to that side.

There is no appreciable paralysis; or mental or moral defect. Unconscious in all these convulsions.

Case.	1	2	3	4	5	6	7
Age at onset.	8 mos	2 yrs	Birth	8 mos	6 yrs	6 yrs	1¼ days
Mental condition.	Bad	Good	Slight	Dull	No change noticeable	Fair	Fair
Moral condition.	Bad	Bad	Good	Good		Good	Good
Paralysis.	Left H	Left H	R. H.	L. H.	R. H.	R. H.	None
Epilepsy.	Yes	Yes	Mal petite	Yes	Convulsions only at onset	Yes	Yes
Time between first and second convulsions.	.....	3 yrs	4 yrs	No long interval	.....	.....	Fourteen months
Athetosis.	.....	Yes	Yes	No	No	Yes	No

Several of the most prominent clinical features of these cases are shown in the above table.

All of these cases, except in birth palsies, began with convulsions, immediately followed by hemiplegia. Two began at eight months; one at two years; and two at six years. In only two cases (five and seven) was neither mental or moral deterioration noted. In all cases, excepting case five, epilepsy is present. In cases two, three and seven, intervals of three and four years and fourteen months respectively intervened between the initial and second convulsion. Athetosis is present in three cases; aphasia in one.

The series of cases is entirely too short a one upon which to base general conclusions; and can only be of value studied in connection with other series of cases.

CORRESPONDENCE.

COLD IN THE TREATMENT OF PNEUMONIA.

TO THE MEMBERS OF THE MEDICAL PROFESSION:

My last paper on *Ice-Cold Applications in Acute Pneumonia* gives a record of seventy-four cases so treated, and only two deaths. Being desirous of making a full collective report on this subject, I take the liberty of asking those who have tested this measure to kindly give me the result of their experience with it. Full credit will be given to each correspondent in the report which I hope to publish.

THOMAS J. MAYS, M.D.
1829 Spruce St., Philadelphia.

RESUSCITATION OF STILL-BORN INFANT BY RHYTHMICAL TRACTIONS ON THE TONGUE.

EDITOR MEDICAL AND SURGICAL REPORTER:

On January 21st last, I was called in consultation to attend Mrs. G., aged twenty-five, in her second confinement. She had been in labor some thirty-six hours without progress. The pelvis was somewhat narrowed in the conjugate diameters. Instruments were used, and after forty minutes delivery was accomplished.

We saw the condition was serious for the child and immediatly pressed the blood from the cord towards the umbilicus; tied and cut it at once and removed the mucus. We used the usual water methods; also tried friction to the spine, back and soles of the feet; also artificial respiration. After trying for ten minutes we saw that our efforts in this line were utterly useless. I suggested "Rhythmical traction on the tongue," and requested my colleague to procure from his pocket-case a small artery forcep which was placed on the tip of the tongue. The tractions were made so that about twenty to twenty-four were produced each minute. We were very anxious; to our surprise in about six minutes the little one's nostrils began to flutter and in less than ten minutes respirations were established and normal in every particular.

A. ERSKINE, M.D.
Rogers City, Mich.

CHINESE CRUELTY.

Some four years ago I spent four days in Canton, the metropolis of southern China, on a special mission to investigate Chinese justice, and the results surpassed my most ghastly anticipation.

What I witnessed was nothing unusual, and is the daily practice of the country, but I am compelled to tone down the details to make them presentable for publication. Nothing but the strongest spirit of inquiry, supported by an iron resolution, carried me through the horrors of those days, and for weeks afterward I suffered from perpetual nightmare.

The place of execution, or "Matou," as it is called by the Chinese, is a filthy yard, long and narrow, like a blind alley, and, singularly enough, it is used as a potter's field when not required for execution.

On a cold January afternoon I proceeded thither to witness the final release of a batch of poor wretches who had already undergone a prolonged course of torture.

On this occasion the death-squad consists of thirteen, who are tightly bound hand and foot and carried in, huddled up

in baskets slung on a bamboo between two coolies. On arriving at the center of the ground these living loads are pitched out unceremoniously, and immediately seized by the executioner and his assistants, who arrange them in two lines in a kneeling position.

At a nod from the presiding mandarian, and with incredible swiftness, the butchery commences. The assistant seizes the first victim by the shoulders from behind, while the executioner steps up to his left side, armed with an enormously heavy, short sword with a broad blade and razor-like edge. Without any compulsion, the victim, still kneeling, bends his head forward, and almost instantaneously it leaps from his body, severed by one swift stroke. The assistant pushes the trunk over forward, and a shrill burst of approving "Hi-yahs" goes up from the crowd.

After the uncertain and clumsy operations of the mediæval headsman, one had been led to suppose that a human head required a great deal of severance; but so adept are the Chinese executioners that they appear to display no more effort or emotion in cutting off a head than they would in lopping a poppy from its stalk.

With fearful rapidity the slaughter proceeds, and not five seconds elapse between the fall of each head. One unerring stroke ends each life, and the victims are so arranged that each can witness the fate of all those in front of him before his turn comes.

The crowd is now in the most jovial humor, and signifies its light-hearted enjoyment by ribald chaff at the expense of the remaining victims, who frequently retort defiantly, and exhibit the most stolid indifference to their fate.

Suddenly a burst of merriment arises in one corner. A portly merchant has approached too near, and his long white coat is splashed with blood. How the bystanders laugh! Was there ever such a good joke!

The last few heads are falling now, when my hands is plucked by an excited youngster of ten, dancing with delight, who cries, eagerly, "Ho-ta?" (Isn't it beautiful?) I repress a fierce desire to throttle him, and in a few seconds all is over. Justice is vindicated, and the crowd quickly disperses, all but the city gamins, who remain behind to rehearse the whole proceedings and to skylark with the bodies.

Horrible though the sight has been, death has, at any rate, been swift and merciful, but another day the supreme horror of Chinese justice is revealed to us.

For certain offenders, notably parricides and women who kill their husbands, the penalty is the "Ling-chee," or "thousands cuts." This is too ghastly for detailed description, but suffice it to say that the victim is first crucified to a low cross, and then slowly sliced to pieces with a knife.

So skilful is the executioner that although his victim soon becomes almost unrecognizable as a human being, yet no vital wound is inflicted till perhaps half an hour of this torture has elapsed, when the agony is ended by decapitation.

So superior an entertainment as this is naturally rewarded by a full house, and even greater merriment prevails than at mere head-chopping displays, which savor somewhat of monotony to the *blasé* Cantonese.—*Harper's Weekly.*

Cystitis in the Female, with Special Reference to Treatment.

John C. Hersler, Ph.G., M.D., *Univ. Med. Mag.* The chief indications for treatment are:

1. To remove any discoverable source or sources of irritation which act through the medium of the urine. This may be affected by a milk diet, and a discontinuance of the use of acids, pepper, etc. Any mechanical source of vesical irritation should receive appropriate treatment.

2. The urine should be rendered bland by the use of a milk diet; the ingestion of considerable quantities of water, the administration of potassium citrate, if the urine be too acid, or of boric acid if it be alkaline.

3. Pelvic congestion should be relieved by hot vaginal douches, placing the patient in the knee-chest position; and the correction of constipation.

4. The inflamed cystic mucous membrane may be relieved by the administration of boric acid, salol, ol. santal, copaiba, or creosote by mouth; or the use of injections of boric acid, carbolic acid, of nitrate of silver in suitable strengths.

5. The patient's general health should be improved by tonics, etc.

6. Rest in bed, especially in all acute cases, is absolutely imperative.

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SATURDAY, APRIL 18, 1895.

EDITORIAL.

THE TREATMENT OF ECZEMA.

Eczema, a term which has brought despair to the doctor and dollars to the quack, has long been the resort of those seeking a name for any skin eruption unknown to the observer. Even in its proper and limited application, eczema, which in protean form has always tormented mankind, is a subject about which medical science knows but little and understands less. Nevertheless, for a man who classifies all skin diseases as eczema, and not eczema (the latter class including the few eruptions he is familiar with, *e.g.*, those of the exanthemata, etc., etc.), there is much to learn.

Eczema was made the subject of a special discussion in the Section of Dermatology, at the meeting of the British Medical Association last year, and the report of the discussion as given in the *British Medical Journal*, contains suggestions of much value, and, as well, discovers the modern views of English dermatologists. Mr. Malcolm Morris, who opened the discussion, was particularly satisfactory in the expression of his opinions.

He assumes that in all cases eczematous lesions should be cured as rapidly and as thoroughly as the therapeutic resources at command will allow. He does not look upon a patch of eczema as a kind of overflow pipe for the escape of "depraved humors," which would otherwise—to borrow the language of popular pathology—"settle in" the lungs or other internal organs, a superstition that still survives in quarters not open to the least suspicion of scientific heterodoxy.

Opinions differ as to whether the disease is, in origin, constitutional or local. Probably the constitutional element is in most cases altogether secondary, the lesion being chiefly the result of parasitic irritation. A constitutional dyscrasia—such as gout, glycosuria, kidney disease, rheumatism, rickets, or scrofula—no doubt has a serious modifying influence on the local process, intensifying it, and preventing or retarding recovery, but the *causa causans* is, in the majority of cases, the action of

micro-organisms. Seborrhœa is a very common precursor of eczema, in fact it prepares the way by making the skin vulnerable by microbes. Unna goes too far when he teaches that eczema is always and in all cases the result of microbic action. Seborrhœic eczema is always parasitic in origin, but not all eczemas are seborrhœic. Often the disease arises on perfectly healthy skin, apparently as the result of some disturbance of the nervous system, caused, it may be, by mental shock, strain or depression, by the action of the cold, or by reflex irritation from the uterus, stomach, intestine, etc. Even in cases in which disordered innervation seems to be the starting point, it is probable that the parasitic factor plays a leading part in the process; the weakening or suspension of nervous control—in other words, the inhibition of trophic influence, in certain parts of the skin creating weak points through which the micro-organisms normally present on the surface of the skin, can penetrate into the deeper layers.

The treatment of eczema must in every case be carefully adapted to the special indications present. There is no general therapeutic formula applicable to all cases; it is not the abstract name but the concrete disease that has to be treated, and not the disease alone, but the patient, with his peculiarities of structure and constitution, behind it.

In the treatment of eczema diet has no influence except indirectly. Thus, if a constitutional condition such as gout or diabetes underlie the eczematous process, of course the dietetic restrictions indicated in the circumstances are called for. Again, if the lesions are of an acutely inflammatory type, the diet should be limited in quantity, and bland and non-stimulating in quality. Apart from these indications there is no reason to think that restrictions of diet have any good effect; on the contrary, a "lowering" regimen may do positive harm by weakening the patient. The true principle in the management of eczema, as far as diet is concerned, is to let the patient take such food as he finds most suitable to his digestive powers. Anything which disorders the gastro-intestinal tract, or which causes acidity, insomnia, flatulence, palpitation, or vasomotor disturbance must be avoided. The same principle applies to drinks; but here, it is almost needless to add, strict moderation in quantity is necessary. In acute forms beer is contraindicated, as are all other beverages likely to cause flushing. There need be no restrictions in the use of tea or coffee unless these beverages are contraindicated by definite ill-effects on the digestion or nervous system. In short, so far as diet is concerned in eczema, "A man's owne observation, what he findes good of and what he findes hurt of, is the best physicke to preserve health."

As a general rule the less internal medication there is in eczema the better. If a constitutional dyscrasia underlie the skin affection it must be treated on the ordinary principles of medicine; if the neurotic element be pronounced remedies directed to the restoration of the nervous tone are indicated; if the patient be broken down by want of sleep and the exhaustion consequent upon prolonged suffering, sedatives and general tonics will be required; similarly if there be disorder of the digestive apparatus this must be rectified by appropriate measures. Where, however, there are no definite indications of the kind referred to, internal medication is not only useless, but positively injurious by disordering the digestion. In an ordinary chronic eczema, where the patient's health appears to be unaffected, and there is no reason to suspect constitutional dyscrasia, trust entirely to local treatment. Where internal remedies are given the selection of the particular drugs employed must be governed by definite indications. When the lesions are acutely inflammatory in character, antimony is valuable, giving mx to xiiij of the vinum antimoniale, repeating the dose in an hour, and, if need be, again two hours later. The interval between the administrations is gradually increased, the dose being at the same time reduced till one of m vj is reached. This should be given thrice in the twenty-four hours until a distinct subsidence in the intensity of the inflammation becomes manifest. The indication for antimony is the presence of arterial tension; on the other hand, depression is a positive contraindication of this drug. If a neurotic element is clearly present in the case, sedatives and nerve tonics must be combined with local treatment. In such cases the sheet anchor is opium, under the influence of which the patient should be kept almost continuously until the nerve storm sub-

sides. In such cases, often, it is of great advantage to begin the treatment with a full dose of calomel, and, afterwards, the constipating effect of the opium should be counteracted by the administration of a saline aperient every morning. If opium disagrees, some other sedative, such as sulphonal, must be substituted. The indication for the use of sedatives is great nervous excitement, accompanied by sleeplessness.

If, on the other hand, the neurotic element shows itself in the form of depression nerve tonics are indicated; of these the most useful, perhaps, is quinine. This may advantageously be combined with opium. If there be much discharge, belladonna may usefully be combined with the quinine. Phosphorus is of great value in counteracting nervous depression and strychnine also often does good. Arsenic, though undoubtedly useful in some cases, is far from being a specific in eczema, and if injudiciously used will do harm instead of good. The indication for its use is deficiency of nerve force combined with absence of acute inflammation in the lesions. If the eruption be of an actively inflammatory type arsenic is positively contra-indicated. If the disease process shows a marked tendency to frequent exacerbations, ergotin may be useful by the control which it exercises over the vasomotor apparatus.

Malnutrition, weakness, and anæmia are indications for cod-liver oil, and general tonic treatment on ordinary principles. Iron, however, is contra-indicated by the presence of acute inflammation; in such cases it adds fuel to the flame. Any source of peripheral irritation discovered, must, if possible, be removed. In women menstrual derangement or uterine disease must be remedied, and hysteria or the disturbances incident to the climacteric must be combated by such remedies as musk, valerian, etc.

It is impossible here to go into the details of the local treatment of eczema of different forms and in different situations. Speaking generally treat every case as if it were of parasitic origin. Even if micoorganisms are not the exciting agents in the causation of the process in all cases, parasitic irritation always comes into play sooner or later as a secondary factor, and requires to be appropriately dealt with. The objects aimed at in the local treatment of eczema are, first, to destroy micro-organisms: secondly, to protect the inflamed surface from the air and further microbic invasion; thirdly, to soothe irritation. The general principles which guide in the application of local remedies are, first, to temper the strength of the remedy to the tolerance of the patient's skin; and, secondly, to keep the remedy continuously in contact with the affected parts.

The best remedy for local use in dry, chronic eczema, especially of seborrhœic origin is sulphur, and next to that resorcin. These drugs not only destroy the micro-organisms on the surface of the skin, but give rise to exfoliation of the horny layer, and bring away with it the microbes which have penetrated to the deeper parts of the epidermis. Morris uses at first, an ointment composed of 10 grains of precipitated sulphur, or the same quantity or resorcin in ʒj of zinc ointment or some other soothing application; the amount of the antiparasitic agent is increased very gradually. When the inflammation is acute, ichthyol is particularly useful, as it is a vascular sedative as well as a parasiticide. Other antiparasitic remedies which are of service as applications in eczema are salicylic acid, white precipitate, boracic and carbolic acid. Use them with cooling "creams" as vehicles when there is much irritation. For the continuous application of local remedies in limited areas of chronic character Morris has found nothing so useful as the plaster mulls devised by Unna, those he finds most generally useful being carbolic acid and mercury, and oxide of zinc.

When discharge is profuse, wash the part with a weak solution of boracic acid, afterwards drying it with muslin bags containing starch and powdered boracic acid, or with flour mixed with a small quantity of the same antiseptic. If itching is troublesome, weak lotions of carbolic acid or tar are most beneficial. For very persistent chronic eczema of the flexures he has frequently had good results from chrysarobin.

Morris sums up the principles on which the local treatment of eczema should be conducted as follows: Soothe when the inflammatory process is acute; stimulate when it is chronic; and in either case keep the parts under the continuous influence

of antiseptics and parasiticides, of a strength carefully regulated in accordance with the intensity of the disease and the sensitiveness of the skin.

To guard against recurrences of the disease, change of climate is often productive of good especially if accompanied by complete rest of mind as well as body. There are no special indications in respect of climate except that eczema, being a catarrhal disease, it will be well to avoid climates which are apt to produce catarrh of any kind. A too bracing climate—especially places where the northeast wind holds sway—should be avoided. The same may be said of sea air. As regards altitude, there is no general rule; as in the case of climate, it is largely a matter of idiosyncrasy. The true principle is to discover what suits the patient. After all, it is the change that is the most powerful alterative. Sea bathing very often produces a recurrence of the disease, but it sometimes undoubtedly counteracts the tendency to relapse.

Morris sums up his own conclusions as to the utility of springs in the following propositions:

"1. No spring known to me has any specific action on eczema.

"2. Such virtue as sulphur waters externally applied possess is due chiefly to the parasiticide action and partly to the temperature at which they are applied.

"3. Such virtue as sulphur, chalybeate, or arsenical waters possess when taken internally is due to their action in quickening the processes of metabolism, increasing the number of red corpuscles in the blood, and giving tone to the nervous system."

ABSTRACTS.

MODERN TREATMENT OF ABORTION.

JAMES R. LATHAM, M.D.

In this paper it is intended to speak of the management of all cases of premature delivery of the products of conception, up to the fourth month. In order that my remarks may be the more easily followed, it seems well that I should premise my discourse by a few words in reference to the anatomy of the uterus and its appendages, and also to say something of the physiology of conception. By this plan we may the better be able to appreciate those changes that take place in the uterine wall and in the appendages and which have so much to do in the destruction or preservation of the ovum in its beginning of that life that, once begun, goes on to birth.

The uterus, as we all know, is suspended in the pelvic cavity by its ligaments; its most important suspensory ligament being the broad ligament. Imbedded in this and connected with the uterus are the fallopian tubes and at their distal terminations lie the ovaries. It is in the ovaries that we have the ovum first appearing through rupture of a graffian follicle, thence taking its way through the fallopian tubes, either to be fertilized by contact with the spermatozoon or to be carried off with the menstrual blood at the first following menstruation.

The fallopian tube appears to be where the meeting of the ovum with the principle that is to render it productive takes place, and a great deal depends upon just where this meeting occurs. For it may happen that the contact is made before the ovum is fully discharged from the corpus luteum and in such a case cause extra-uterine pregnancy.

Now let us imagine that an ovum has liberated itself from its bed in the corpus luteum, reached the fallopian tube, met and been vivified in some subtle way by contact with the spermatozoon. It now finds its way out into the uterine cavity and attaches itself to the mucous membrane lining this organ. We now find

changes commencing in both its own condition and in the structure of the surface to which it is attached.

When the ovum first enters the cavity of the uterus and becomes attached to its membrane, its cell wall sends out numerous prolongations; these hold the egg in its position and facilitate its nourishment from the blood-vessels of the uterine mucous membrane. There is also an increase in the blood supply in the uterine wall corresponding to the place of attachment.

This state of things continues until about the third month, when the chorion and its villi atrophy and finally disappear, except at that portion attached to the uterine wall. Here the villi develop still further and the placenta is formed.

It is the fourth month, however, before the placenta can be fairly differentiated from the rest of the chorion; and it is the time previous to this that I will include in speaking of cases as abortive. So we have in all cases up to the fourth month the following intra-uterine condition:

An ovum attached by villi to a spot on the lining mucous membrane of the uterus with a connection between it and the blood supply of the uterine wall, and an increased blood supply in the uterine wall at that place not only, but an enlargement of the whole organ and a more than ordinary amount of blood corresponding in amount to the length of time of its attachment. Now if by reason of a sudden jar, as by falling and striking on the buttocks or feet, or in any way so as to transmit the shock to the uterus, we may have a rupture of the villi that attach the ovum to the mucous membrane, and the chorion being thus deprived of its means of nutrition, the ovum is cast off.

Sometimes it happens that the ovum being detached at one point becomes attached at another and the development goes on; the only sign of this being a slight discharge of blood from the lacerated spot per vaginam, and the continuation of pregnancy.

Thus violence may be, and is, one of the causes of abortion. In speaking of the causes of abortion I shall not attempt to mention all the conditions that may cause it, but will confine myself to those that are most common and with which we have to deal in our ordinary practice.

Now there is, I have found, a frequent cause for abortions in the abnormal condition of the intra-uterine mucous membrane caused by endometritis. If we study the changes in the structure of the endometrium that this condition induces, we can readily understand why the ovum, even after it has become lodged, fails to so firmly affix itself as to be able to withstand the slightest assault upon its position.

The surface of the mucous membrane is changed both in the chronic and acute forms of the disease. In the first we have the mucous lining smooth and deprived of epithelium; in the second it is roughened and congested. There is a change also in the epithelium, it being now of the basement variety instead of cylindrical or ciliated. It seems to me that here we have one of the great causes of non-retention of the ovule.

Let me quote a few words from Thomas' description of the condition of the lining of the uterine cavity in endometritis. In his description he is in agreement with Scanzoni. He says: "The mucous lining of the uterine body was in two cases quite smooth and to a great extent deprived of epithelium, while in a third it was roughened and presented points where the enlarged blood-vessels created a number of reddish spots." It is highly probable, too, that in most cases of recent origin these pathological appearances would not be found to exist, but in place of them a thickened, congested and florid appearance would present itself.

There is another condition whose existence has been so coincident with abortion as to compel interference for its relief; that is, lacerations of the cervix. I am not prepared to state how this exerts its influence, but its repair has often caused a cessation of abortions. It may be that the cicatricial plug in base of tear exerts a nervous influence, but I am more inclined to believe its bad influence to be due to its keeping up an endometritis.

Uterine displacements are another cause. I do not believe that these displacements are per se a cause of abortion, as I know of cases where pregnancy has gone on to a successful termination coincident with most marked displacement. It is only in such cases where the displacement has caused interference with the circulation in the organ, and where congestion has changed the normal condition of the

mucous membranes, that we may expect non-retention to occur.

There are causes due to conditions of the mother's blood affecting the ovule. Among these we may include syphilis, the infectious diseases, powerful emotions, etc.

There is also a condition spoken of as a "habit of aborting." We have all known of such cases where a woman will habitually abort after about the same period of utero-gestation, from no other apparent cause but the nervous effect of "habit." I strongly suspect, however, that in most of these cases, upon thorough examination, it will be found that the uterine mucous membrane is not in a condition to sustain nutrition in the attached ovum.

TREATMENT.

The treatment may be divided in two classes: expectant and preventive, in those cases where the ovule has not been cast out through the os; and radical, where we have reason to believe that the ovule has become completely detached and has passed through the os.

In the first class of cases we will be sent for to see a woman who anxiously informs us that, after having missed her menstruation for a month or two and believing herself pregnant, she has noticed slight pains in her pelvic region and a slight show of blood on her linen. She may or may not give a history of extra activity just prior to the occurrence. It is well now to inquire about the blood flow, its amount, and to inquire closely whether she has felt anything pass before the visible discharge of blood, for often the ovule will become detached and escape while the woman is on her feet, and she may remember a slight feeling of shock caused by the dilatation of the os during its passage. But failing in this, we should direct the woman to at once relieve herself of closely-fitting garments and to assume a recumbent position preferably in bed. We should endeavor to relieve her anxiety by encouraging words and administer a good dose of opium or morphine to relieve the uterine irritability. She should remain in bed closely until we are assured that, by the immediate cessation of the blood flow, we are on the right track. She should then remain in bed until there has been time enough for the ovule to reattach itself either wholly or in part; meanwhile we should give her just enough opium to quiet uterine sensibility.

If, however, we should find a greater amount of hemorrhage on our first visit, (and I know of no rule to guide us—a man in this must use his judgment,) and we conclude that palliative measures are useless, we then take such measures as will empty the uterus most thoroughly, to prevent useless loss of blood and subsequent septic infection by retained products of conception. In doing this we first anesthetize the patient if she be nervous and excitable. Anesthesia is not, however, always necessary. We then thoroughly cleanse the external genitals and the vagina by washing, first with soap and warm water, and then with bichloride solution 1 to 2,000. We should thereupon fully dilate the cervix with a steel dilator, and then scrape the lining wall of the uterus with a curette, until we are satisfied that we have removed all the retained products. Now we should wash out the cavity with a hot bichloride solution, 1 to 2,000, making sure that, there is plenty of room through the cervix for an easy return flow. If we have well emptied the uterus of the membranes we will shortly have the water returning clear of blood. We now fix the cervix with a tenaculum and proceed to introduce into the uterine cavity a strip of antiseptic gauze about two inches wide, and this we pack in until the cavity is moderately full, leaving about an inch of the gauze protruding through the cervix into the vagina. The vagina is also filled with gauze. The speculum is withdrawn, and the gauze left in position for two or three days, the woman remaining in bed. If everything goes well and there has been no great pain, no discharge through the gauze, and no rise in temperature, we may on the third day withdraw the gauze first from the vagina, wash out the vagina with the bichloride solution and dry it with absorbent cotton; now we may proceed to withdraw the strip of gauze from the uterine cavity. Often we will find a large portion of it forced out into the vagina by the uterine contraction. Taking hold of it with the dressing forceps we gently make traction and find it will easily come out. We now repack the vagina, after flushing it again with the bichloride solution, leaving this in for a day; we can then withdraw this and leave the case to recover without more active local interfer-

ence. Sometimes we find, however, that there is more or less hemorrhage following the first packing. We know by this that there is something retained and another curettage is necessary. This should be done under ether with the same aseptic precautions, packing as before. If, however, the primary operation is thoroughly done, I have seldom found it necessary to do a second operation, unless, indeed, there be some deeper reason for a continued hemorrhage. The advantage of the gauze packing is that it acts as an irritant to the uterine cavity, causing contractions, and also as an admirable method of drainage. There will be found some difficulty in introducing the gauze until practice has improved the novice's method. Pull down the cervix gently with tenaculum to straighten the uterine canal; then introduce with instrument specially designed, called a gun-screw applicator. By this treatment I have avoided all dangers of metritis, endometritis, etc., and had the woman practically well on the fourth day.

It will, perhaps, be noticed that I have made no mention of abortion produced by criminal means. In such cases, should there have been no traumatism, the treatment is the same. In such cases, however, we often do not see them until some time after the death of the ovum, and the greatest care is necessary to prevent the effects of septic infection. — *American Medico-Surgical Bulletin.*

THE SKUNK AS A SOURCE OF RABIES.

W. Wade, (*The American Naturalist*, March 1895,) writes:

Doubtless many have heard the story that the bite of a skunk can convey rabies. I first heard it some years since in the form of an inquiry from a distinguished physician in London; and to an old fox-hunter, who has known of hounds by the dozens being skunk-bitten with no subsequent ill-effects, the story was exceedingly ridiculous. But when my friend stated that Dr. John H. Janeway, a surgeon in the U. S. Army, was said to have given the story his endorsement in a New York medical journal, the matter became immediately worthy of most serious consideration, my friend suggesting that there might have been something in the environments of the skunk, at the time Dr. Janeway wrote, to account for the marvelous exception, and I at once set to work to investigate what was known on the matter. Immediately I was involved in a maze of contradictions, no two stories agreeing. No belief of the story could be found anywhere but in Texas, the Indian Territory, and adjacent districts. Even in southern Kansas no such belief was found. Then in some cases it was the skunk, *Sui generis*, that had this power, while again it was only one particular variety of the skunk, the "hydrophobia cat." The vulgar idea was that any skunk, rabid or non-rabid, was capable of conveying infection of rabies, while more intelligent observers held that only a rabid skunk had this power, but even these seemed to hold that there was special danger of skunks being rabid, or that the virus conveyed by their bite was more potent than that from any other rabid animal. Again, instances were cited of men dying as the result of a skunk bite; in one case after many months of lingering illness, which most certainly could not be rabies, or another case of a man exhibiting rabic symptoms after a skunk bite but recovering on copious bleeding, and evidently there was no rabies *there*. Again, the New York *Sun*, about six months since, had a most blood-curdling story of many soldiers in Mississippi dying from the bite of a skunk, and the deaths spread over a period of several months, a marvelously long-lived skunk to live a month after rabies had developed to the stage of being communicable, and inquiries in Mississippi showed that no fatal case of skunk bite was ever known there, although skunks were sometimes kept as vermin killers.

Now remember that this story drew all the weight it could have from the allegation that *Dr. Janeway had endorsed it*, and remember further, that the belief was that the skunk, *at present*, had this power. At last I was able to get Dr. Janeway's

paper, which was published in the *Medical Record* of New York, March 13, 1875, and a more ridiculous breaking down of a ridiculous myth I never saw.

It appears that Dr. Janeway was stationed at Fort Hays, Kansas, when an epidemic of rabies broke out in the surrounding country, and his paper in the *Medical Record* was based on his report to the Surgeon-General of the U. S. Army; and in a letter to me he says that after writing this paper to the *Medical Record*, he endeavored to trace the origin of the epidemic, and if he remembers aright, found by inquiries that it was first noticed in the northern tier of Texas counties, and travelled north by west to the Fort Hays reservation.

So far from Dr. Janeway stating that *any* skunk could convey rabies, he distinctly refuted the assertions of some clergyman to this effect, citing instances of dogs and men being bitten by a skunk without injury (and one case wherein one person died and two escaped unhurt from the bite of the same rabid wolf). Dr. Janeway gives a very qualified adhesion to the belief that the bite of a rabid skunk was fatal in a larger proportion of instances than the bite of other animals, and thus explains it:

"That more cases, proportionally, may result fatally from the bite of this animal than from the bite of rabid dogs and wolves, is probably, if not actually, the case; still there are obvious reasons for it to be so. An animal, nocturnal in its habits, generally timid, but armed with a powerful battery to resist any injury or affront; one that will not bite in defence until the secretion provided for it by nature is exhausted, loses that secretion by the disease. It is a well authenticated fact that rabid skunks are entirely free from the odor so characteristic of these animals, which could not occur if the secretion were not exhausted; and forgetting its normal timidity, will attack any person or animal it may come in contact with, biting the most exposed parts of the body, the alæ of the nose, the lobe of the ear, the thumb or one of the fingers, and passes on. Here is probably the reason these bites are more fatal than those of other animals—always in a vascular part not protected by clothing—which prevents by wiping away the poisonous saliva, from the fierce attacks of the mad dog or wolf and thus saves the life of the one bitten." This is very intelligible and reasonable.

Then, even those who believe that only the *rabid* skunk conveys rabies by its bite, and that the skunk is more susceptible to rabies than other animals, seem to believe that this is the *present* state of affairs that skunk bites are *now* peculiarly dangerous. Now Dr. Janeway expressly says that rabies was epidemic in Texas when he made his observations on the disease in skunks and other animals, thus: "Rabies Mephitica, like Rabies Canina, is evidently epidemical, no cases of it having been reported previous to 1870 in this region;" and in his letter to me of December 15th, he says: "The epidemic was short-lived, no cases that I heard of occurring the next year. A great number of skunks must have succumbed to the disease, as they were less plentiful after that season;" and further, a surgeon in the U. S. Army, now stationed at Fort Bliss, writes me: "I have served five years in Texas, four in the Indian Territory, four in Dakota and other places where skunks abound; during this time, I have never known anyone to be bitten by the animal referred to. The bite of a rabid skunk will, of course, produce the disease, and in other instances where serious trouble has followed this occurrence, I am of the opinion that the symptoms are due to septic poisoning. The bite or scratch of almost any animal is more or less poisonous from the bacteria always present on the teeth and claws. Even *human saliva* is poisonous when injected into certain animals, as has been conclusively proven by our present Surgeon-General."

Now I have never been able to get hold of anybody, in Texas or elsewhere (of course, other than Dr. Janeway), who had ever seen a case of skunk rabies, or who had anything like definite evidence on the matter; "I have heard it," "It is generally believed," etc., has been the utmost limit of statements on this point. Some believe it themselves, but are completely "out of reasons for it." One well-known naturalist puts his views on the question in this form:

"1st. The bite of the skunk often communicates rabies and death.

"2nd. Skunk rabies kills more people than dog or wolf rabies.

"3rd. To be bitten by a skunk is to risk a terrible death.

"4th. Beware of all skunks, for one can never tell when a rabid skunk will come along."

And perhaps this expresses intelligent, but incorrect, belief on the subject as well and accurately as it can be done. Therefore let us examine what the actual evidence on the matter is. Dr. Janeway, like any intelligent physician would do, refutes the self-originating idea of rabies in the skunk (and parenthetically, a physician with all the light of recent knowledge as to rabies, tells me that Dr. Janeway's conclusions are singularly sound and conclusive, when the deficiency of exact knowledge on the disease, then the case, is taken into consideration). That idea is such utter nonsense that only the erroneous assertion of Dr. Janeway's endorsement entitled it to a second thought. Then Dr. Janeway positively says in his paper in *The Medical Record* that rabies was epidemic when he made his observations, and he adds in his letter to me that this epidemic was so transient that in one year it had passed away. (Scientific men have suggested, as the probable explanation of such epidemics wearing themselves out, that the subjects die off faster than they can communicate the disease to fresh victims). A surgeon in what is now the central seat of belief in the "skunk-rabies" delusion has not heard of a case in the nine years he has been in this district. A physician in southern Kansas, not remote from Fort Hays, wrote me that he had never heard of the skunk-rabies belief, that skunks were not uncommon as pets in his neighborhood (deprived of their scent powers, I believe). From Southern Colorado to North Dakota, I can find no belief prevailing in this myth. Then it all amounts to this: Dr. Janeway made careful observations twenty years ago, during an epidemic, he says this epidemic lasted only a year. A surgeon in the U. S. Army tells us that the ill effects that do sometimes follow skunk bites may readily be accounted for as septic poisoning, just as might result from the bite of a fly or the scratch of a tiger's claws. Therefore, my answers to the points I quote from a well-known naturalist are:

1st. The bite of a non-rabid skunk can communicate no rabies, and it is beyond question that rabid skunks are exceedingly rare, if found at all. In no part of this country were rabid skunks ever reported save during a short period of epidemic rabies in Texas and Kansas.

2nd. Skunk rabies perhaps killed more people in Texas, etc., during a certain period than canine rabies, but because sleeping in the open air ("camping") was common there and the skunks readily encountered men. I think that statistics would show that dog and wolf rabies has caused twenty times the deaths that skunk rabies has.

3rd. To be bitten by a skunk is to risk contracting septic poisoning, I believe a terrible death, and the bite of a fly is said to have produced the same disease, and I think a butcher cutting himself with his butchering knife is in the same danger, but none of them risk rabies.

4th. Well, yes, "beware of all skunks" on "smelling" grounds, but it might as well be said "beware of all dogs, for one can never tell when a rabid dog may come along."

Minimizing dangers that are real is most dangerous and reprehensible, but making spooks of mist is but little less so. Some boy reads or hears that skunk-bite "will make a man go mad," some day he does get a skunk bite, and we can easily imagine the terrors he suffers, and all from the veriest bosh.

The subject of rabies is now loaded down with quite enough rubbish, such as the absurd notion that if a healthy dog bites a man and subsequently becomes rabid, the man will "go mad" also, and adding another piece of bosh is more than we ought to be afflicted with.

I fear I may just now be venturing beyond my depth, and therefore, I wish the following to be taken entirely as suggestive: Must it not have been under very exceptional circumstances that rabies was first introduced among skunks in Texas? It surely is true that rabies is especially a disease of the canidæ, dogs, wolves and (?) foxes. Now a rabid dog (and I suppose, a rabid wolf), in the stage of the disease in which communication of infection is possible, is about destitute of intelligence. It runs blindly, wildly, and without purpose. The skunk is both nocturnal and retiring, and would easily and naturally get out of the way of a rabid dog "on the run." In Europe where rabies is more

prevalent than in this country, the polecat and other animals, relatives and of similar habits to the skunk, are never known to be rabid. So how in the world did the first rabid skunk become so? Unquestionably there were rabid skunks, and almost certainly there was a first one which communicated the disease to its fellows, and does it not seem certain that this first victim became infected under most peculiar and exceptional circumstances, and that these are not likely to be repeated? And, as a final wind-up, What is all this pother about? There is not a particle of evidence that skunk bites are particularly dangerous, and while nobody need wish for such a bite, if he does get it he need not worry himself about any danger of rabies.

THE DURATION OF THE CONTAGIOUSNESS OF DIPHTHERIA.

The *Journal des praticiens* contains an article in which the writer remarks that this question is the subject of much controversy. A young physician, M. Tézenas, recently collected sixty observations of patients who were attacked with characteristic diphtheria, and he divided these cases into three series, and made a bacteriological examination of the products taken from the bucco pharyngeal mucous membrane and from the nasal discharge. The following results were obtained: In the first series, in forty-four cases, the mucous membrane did not present any false membranes and there was no nasal discharge. On bacteriological examination, the cultures showed no bacilli, except in three or four cases where Lœffler's bacillus disappeared after four days. In the second series, in five cases the mucous membrane was divested of its false membranes and the nasal discharge dried up. Nevertheless, Lœffler's bacillus persisted from twelve to twenty-eight days. In the third series, in eleven cases the nasal discharge persisted, and the cultures with this discharge were positive, although those of the products drawn from the bucco-pharyngeal mucous membrane were negative. The presence of bacilli in the nasal discharge was observed for from five to thirty-five days. These facts, says the writer, lead to the following practical conclusions: 1. In a number of cases the metadiphtheritic contagiousness ceases with the disappearance of Lœffler's bacillus. Nevertheless, the irritated condition of the bucco-pharyngeal mucous membrane, under the influence of the intercurrent measles, favors the increase of the bacilli and their presence in the mouth; hence the necessity of a bacteriological examination of the products taken from the mucous membrane of this cavity. 2. Not infrequently (in eleven cases out of sixty) Lœffler's bacillus disappears from the throat, but is still found in the nasal discharge. The trouble is thought to be common coryza, which is a mistake, as this discharge is not accompanied with any symptoms of classic coryza. There is no conjunctival injection, or headache, or watering of the eyes. Ordinarily it is unilateral. The discharge is a transparmucus and by no means the sanious discharge which succeeds false membranes of the throat. 3. According to M. Tézenas, Lœffler's bacillus exists in the nasal cavities as long as the nasal discharge continues, and disappears when it does. He adds that when this discharge is absent there are no bacilli in the nose.

In practice, then, says the writer, this fact must be taken into consideration, that a nasal discharge the origin of which does not coincide with the disappearance of the false membranes is not diphtheritic. It does not contain Lœffler's bacillus. The bacteriological examination proves that unquestionably.

Anti-Toxic Action of the Liver.

It has been established for some time, says the *London Lancet*, that the liver has a power of retaining certain poisonous alkaloids in high proportion and in their most active state, when injected into circulation. Dr. Schupfer, of the University of Rome, Italy, has now shown by experiments on frogs that intrinsic action, due to the specific activity of its cellules, the organ diminishes the toxic power of the alkaloids with which it is brought in contact, not only those introduced from without, but those elaborated within the body, as from disease.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE ANNALS OF GYNECOLOGY AND PÆDIATRY, JANUARY, 1895.

Charles Greene Cumston, B.M.S., M.D., Instructor of Clinical Gynecology, Tuft's College, contributes an article on

Parietal Fibro-Myomata of the Uterus, and Professor Vulliet's Operation for their Extraction.

After discussing the general subject of fibroids, the writer proceeds to describe Professor Vulliet's operation for their extraction. The procedure is composed of three steps: (1) dilation; (2) "debridement" of the neoplasm; (3) after treatment.

To make the diagnosis the uretus must be dilated sufficiently to allow the finger to penetrate easily into the cavity. If the cavity be not lengthened, the index finger will be sufficient, but with a lengthened cavity the index and medius fingers must be introduced, and if the fibroid is very high up in a deep cavity it will be necessary to introduce the hand as far as the root of the thumb. Vulliet uses in certain cases male urethral sounds of laminaris, cut the length of the cavity, several being inserted together. When sponge is to be used it should be selected for the size of the cavity to be dilated and should be most carefully prepared. The sponge is cut like a cone. Operation should never be performed immediately after removal of the cones; the cavity is irrigated and packed with cotton, which is left in place for two days; after this the field of operation is considered sufficiently sterile.

Debridement. The incision ought not to be either a simple scarification or a "boutonniere." To accomplish the end the direction and length should be proportional to the direction and length of the greatest diameter of the neoplasm, and its depth should be that of the tissues covering the tumor.

After treatment. On the next day ergotin is given and electricity is applied. The cotton packing is removed every forty eight hours. Neither finger nor foreign body excepting the cotton or the irrigator should be introduced into the uterine cavity. Three eventualities can happen after incision: First, enucleation is immediately done; secondly, the endometrium unites and the tumor slowly developes into a polypus protruding into the uterine cavity; and lastly, no modification may take place, the neoplasm remaining in the same position.

Contra-indication. This procedure is absolutely contra-indicated in all cases in which the dimensions of the growth are such that an incision the entire length of the uterine cavity is not large enough to allow the production of spontaneous enucleation. Also, even when the uterine cavity is large enough to permit of a sufficiently long incision, the upper limits of the tumor are too high up in the abdomen, thus preventing forced enucleation in case commencing infection might appear. And lastly, any symptoms indicating a virulent process in the uterine cavity is an absolute contra-indication.

James A. C Goggans, M.D., of Alexander City, Ala., contributes an original article on

Extra-Uterine Pregnancy.

The author is strongly opposed to the use of morphia or electricity for destroying the life of the fœtus. He says, "I regard those measures as unsurgical and fraught with much danger. Only eight or ten cases of extra-uterine pregnancy have been carried to full term with satisfactory results to both the mother and child, so the chances for such a happy result are so slender that I advise such patients to have the whole mass removed just as soon as the diagnosis is made certain. Especially is this treatment indicated during the first three months and if the rupture has already taken place.

After the fourth month, and up to the period of false labor, operation is not advisable. Operate in all cases after false labor and death of the child, when the amniotic fluid has been absorbed, indicating that the circulation in the placenta has ceased.

Under any circumstances, I would advise operation when the life of the mother is in danger."

Philander A. Harris, M.D., Patterson, N.J., contributes a paper on "Pelvimeters and the Practice of Pelvimetry as a means of Discovering Irregularities of the Pelvis which are likely to Embarrass Parturition," making an earnest and forcible plea for the more general use of pelvimetry. The various forms of the instrument are described and illustrated and their imperfections shown.

A. Lapthorn Smith, M.D., etc., of Montreal, Canada, contributes an article entitled "What has Sewer Gas got to do with Bad Results in Obstetrics and Gynecology," relating a number of instances in which patients did badly on account of poisoning of the atmosphere by this gas

Carey Kennedy Fleming, M.D., describes "An Aseptic Goodell Dilator" designed by him.

The editorials in this issue are: "Holmes and Puerperal Fever," "Professor Richelot and Vaginal Hysterectomy," "The Special Action of Permanganate of Potassium on the Gonococcus."

In the Department of Pædiatry, E. Channinm Stowell, M.D., of Boston, describes "A Cheap Form of Malt Diastase for Poor Practice."

The editorials in this department are: "Dr. Hartwell and the Condition of Health in Massachusetts," "Foreign Bodies in the Heart," "The Relation between Tuberculosis and Diphtheria."

[In reviewing the paper of Dr. Geo. S. Peck on Appendicitis, which appeared in the last issue of the *Annals of Gynecology and Pædiatry*, the statement was made that the author had lost two cases out of the four reported. The author has called the attention of the editor to the fact that there was but one death out of four—the second death occurring in a fifth case, reported for comparison. The editor takes great pleasure in correcting this mistake on his part. In a personal letter Dr. Peck states that he has made seventeen operations for appendicitis (all pus cases but one). Thirteen out of the seventeen are alive and perfectly well.—E. J. M.]

THE BRITISH JOURNAL OF DERMATOLOGY FOR FEBRUARY.

Dr. Alfred Sangster reports a case of

Congenital Exfoliation of the Skin.

The patient was a man of twenty-four years who seemed rather stupid. The history given by his parents was as follows: The parents were both healthy and had ten children, four of them living and healthy. No history of syphilis nor any affection similar to this one.

Three weeks after the birth of the patient the skin of his forehead began showing signs of desquamation and in three years this had spread over the body. The patient is physically weak but seems to have good health excepting loss of sleep from the itching due to this skin affection. Three or four times yearly there are exacerbations and at these times the scales are cast off so freely that handfuls may be collected from his bed. He suffers also from chronic constipation.

Removing the clothing the patient was found to be fairly well nourished, seemingly not very muscular. The skin was dusky, deepening to brownish in places, and the general complexion dark.

Extensive areas of brittle crackling epidermis similar to those surrounding old leg ulcers could be found and from those sheets of epidermis might be peeled, the surface underneath appearing grayish, sticky and smooth. No inconvenience resulted immediately; but in a short time a tingling or smarting would be felt and the denuded surface would become marked by hyperæmic, and then subside by degrees to the condition of that removed. Examination of the removed superficial layer showed the under surface marked by a network similar to that of normal skin and without the papillary elongations found in ichthyosis. Other areas were found with these changes going on spontaneously. The nails and hair seemed unaltered.

The case is considered unique and to differ from ichthyosis in the absence of hyperkeratosis and of papillary hypertrophy.

Dr. Henry W. Stelwagon has an article on "The Contagiousness of Molluscum Contagiousum," quoting most of the cases on record bearing on the subject and stating that at intervals the controversy is renewed and always closes with some more evidence in favor of the infection theory. He is decidedly of the opinion that the disease is communicable.

JOURNAL OF NERVOUS AND MENTAL DISEASE

Dr. Philip Meirowitz reports a

Case of Multiple Neuritis Due to Acute Arsenic Poisoning.

The patient was a young man of nineteen years, who swallowed a teaspoonful of arsenious acid in mistake for bromo seltzer. As soon as he discovered his mistake he vomited as much as possible of the poison and went home and to bed. Three hours afterward severe vomiting began and the iron antidote prescribed by a physician was rejected as well as everything else.

After an illness lasting eleven days, and during part of which the patient had hemorrhages from the ears, hallucinations of sight, delirium, etc., convalescence began. Nine days after this severe burning pains began in the legs, preventing sleep, and three days later they extended to the feet and these became swollen. These pains continued for nine weeks. There was at no time any pain in the arms, but some tingling in the hands.

The patient came to the dispensary on crutches. He had no facial paralysis, no speech disturbance, and had had no double vision. Examination shows his gait to be markedly ataxic, walking performed better with the shoes on than off, and marked involuntary twitchings in the calf muscles. There is marked tenderness to pressure along the feet, legs and thighs, and the muscles of the leg are atrophied. Coarse strength is preserved in the thigh muscles. The foot, patellar and cremasteric reflexes are gone; but the gluteal, abdominal and epigastric ones are present.

Tactile anesthesia is found in the feet and to a point just above the ankle joint; above this is an area of hyperesthesia and there is general hyperesthesia to pain throughout the lower extremities. The feet are anesthetic to the thermal test and the lower legs hyperesthetic. Anesthesia to galvanic and faradic currents is found in the legs. The muscles of the hand are atrophied, those of the body not affected, and no disturbances referable to the central nervous system.

The treatment consists in the use of the static and the induced currents, and the internal use of strychnine sulphate, of which one-twelfth of a grain is being given three times daily, with apparent benefit.

THE PHYSICIAN AND SURGEON.

Dr. W. H. Haughey writes of the

Treatment of Eclampsia.

The opinion of the author is that this disease is a taxæmia in which the renal disturbance is at most an accessory, and is probably very frequently a result, as in diphtheria. Cases are frequently seen in which there is decided albuminuria, but no uræmic symptoms, and cases in which no urinary trouble

was found until just before the eclampsia showed itself. A theory that he is disposed to accept is that there is a poisoning by fœtal waste products. Whatever the cause may be, the best treatment for a patient who threatens to have the disease, is the prophylactic one—stimulation of the skin, kidneys and bowels When the convulsions begin the author has used with success a quarter grain of morphine after each spasm unless, he says, they are too close together. From ten to twenty grains of calomel are given in divided doses, and, in one or two cases, an eighth of a grain of elaterium was given every two hours until one-half grain was given.

Other writers have advocated rectal injections of chloral, every half or three-quarters of an hour if required, no less than one half drachm being given at a dose, tincture of veratrum viride in fifteen minims to one drachm doses every fifteen minutes until the full physiological effect (vasomotor paralysis) is obtained, etc., and good results seem to follow each of these methods. Chloroform will control the convulsions, but seems an undesirable substance to use on account of resembling in its effects the narcosis following the convulsions. Blood-letting has long been recognized as one of the best means of treat ing a plethoric patient, and the majority of cases of eclampsia occur in such women.

Dr. F. Maas reports the

Cure of an Hepatic Abscess of Long Standing by Operation.

In northern climates the author thinks hepatic abscesses a comparative rarity and that the majority of pus accumulations in this region occur around rather than in that organ. While an abscess may occur in the liver from the entrance of pus from various sources, the most common is probably that following tropical dysentery.

The subject of this history is a man forty years of age who suffered seventeen years ago from recurrent jaundice without pain. During the last six or seven years this became persistent and during the summer would be accompanied by pain in the hepatic region radiating to the shoulder and back. These symptoms disappeared at the approach of cold weather, but last winter they continued and the pain become so severe as to interfere with sleep. The bowels were alternately constipated and quite loose. There is no history of previous bowel trouble excepting an occasional diarrhœa due to beer. Severe chills were felt at intervals last winter.

Physical examination showed the temperature to be 103°, the tongue coated, skin tinged grayish yellow, the upper border of the liver at the usual level and the lower one two or three inches below the boundary of the ribs, the spleen was a little enlarged, the liver region sensitive to touch, the urine normal, and the gall-bladder difficult to outline but seemingly enlarged.

Under chloroform an incision seven inches long was made over the lower border of the liver. Palpation revealing a hard spot on the convex surface of the liver, one of the ribs was resected, an opening made in the pleura and the diaphragm and the edges of the latter stitched to the skin incision The wound was packed with gauze, and the formation of adhesions waited for.

Three days later, after considerable pain and rise of temperature, a free movement of the bowels took place and gave great relief and resulted in an almost normal temperature. The discharge contained much pus.

The following day under chloroform anesthesia three large trocars were inserted into the abscess and about a pint of thick odorless pus withdrawn; the canulas left in position, to avoid hemorrhage, and the wound dressed.

A free discharge of pus continued, as much as one pint to one-half pint escaping daily for three weeks.

The patient developed a good appetite and made so good a recovery that there is now only a small discharging sinus and the author is not disposed to take much pains to have this heal as he thinks it a safeguard against another accumulation of pus. In his opinion this trouble started seventeen years before with the absorption of a little pus from an intestinal ulcer, and the abscess emptied itself pretty thoroughly for eleven years, and then at intervals for six more; but then in some way the escape of pus was partly prevented and the symptoms became prominent. Streptococci and staphylococci were found in the pus, but no amœbæ coli.

Dr. Harvey J. Chadwick makes a plea "Pneumotomy in Phthisis Pulmonalis." English surgeons in Australia employ this treatment with success, and it is certainly in accord with modern surgery of other parts of the body.

According to the experience of Adjunct Prof. Vansant, *recurring habitual* or *epistaxis* is due, in the large majority of cases, to ulceration of the anterior and inferior portion of the nasal septum, and is associated with slight or moderate deformities of the septum. The following treatment is recommended:

Treatment of an attack, which may be carried out by the patient, consists of firm and prolonged compression of the nose with the fingers, the patient being seated or reclining, and the head held erect, or bent slightly forward; if this is not successful, a loose plug of absorbent cotton saturated with full strength official solution of hydrogen dioxid is inserted and the compression of the nose continued. If the patient finds it necessary to seek professional aid, the bleeding point should be found and touched with pledgets of cotton saturated with a 5 per cent. or 10 per cent. solution of silver nitrate; if this is unsuccessful, the galvano-cautery knife heated to a dull red, should be lightly applied to the source of hemorrrhage. The patient should be instructed to apply emollient ointments, and to avoid picking the nose.

For the permanent relief of such cases, it is desirable to correct the existing deformity of the septum, otherwise repeated ulceration is likely to occur from slight abrasions due to accumulation of dust and scabs. The desire to pick the nose, under such conditions, is almost irresistible. Correction of the septal deformity prevents these accumulations and the temptation to pick the nose is removed.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE

Lumbar Puncture for the Removal of Cerebro-Spinal Fluid.

This was the title of a paper by Dr. William Browning, of Brooklyn, read at a meeting of the American Neurological Association. He reviewed the main points in this recently devised operation. Brief notes of a few cases were given, as well as directions for its performance. The following conclusions were reached:

1. The method was simple, easily practised and rather attractive.
2. In itself it was usually without danger.
3. By it we certainly could draw off cerebro-spinal fluid.
4. The quantity removed at short sittings had been from one ounce to one and a half in adults.
5. This without doubt represented the amount of free fluid usually present in the lower vertebral canal even when occluded above.
6. In internal hydrocephalus the relief, if any, was but very temporary. In the common form due to tubercular meningitis the result was not worth the trouble, while in the closed or sacculated forms it must rather do harm than good.
7. As a diagnostic means—*e.g.*, in suspected meningeal hemorrhage—it was valuable. As an index of pressure it might also be worth noting.
8. It was worth further trial—(*a*) as a passing relief in brain tumors not complicated by hydrocephalus; (*b*) as a substitute for trephining in progressive dementia; (*c*) in certain spinal troubles; (*d*) and possibly as a means of applying medication directly to the spinal meninges.
9. In conclusion it might be said that, while admissible in all cases of brain pressure, there is as yet no established indication for this procedure except for diagnostic purposes.

Ingrowing Nail.

At a recent meeting of the Congres de l'Association francaise pour l'avancement des sciences, a report of which is published in the *Progres Medicale* for September 1st, M. Felix Regnaut, of Paris, read a paper on this subject. He remarked that different writers had attributed this trouble to many causes—such as lymphatism, improper shoes, etc.—without defining the relative importance of each. Some writers had regarded shoes as the principle influence in causing ingrowing nails, although Dionis had observed ingrowing nails among bare-footed monks, and Binaud had seen it among tuberculous patients who were confined to their beds. Tight shoes had deviated the great toe and bent the nail, but not sufficiently to cause ingrowing, and although it might be curved like a claw and sunk deeply into the flesh, it did not necessarily give rise to ulceration. Poniet had shown that lymphatic persons who had small, flat nails and a thick great toe were often subject to ingrowing nails. The constitutional condition was the primary cause; shoes played only a secondary part and applied only to one class of ingrowing nails, which occurred in healthy, non-strumous persons, the great toe of whom had been more or less altered by the kind of shoes worn.

M. Regnault thought that traumatism and dirt were predominant factors in giving rise to cultures of common microbes in the pus in the groove of the nails. Sometimes, also, a contusion of the great toe had caused ingrowing nail. Traumatism might occur after cutting the nails. The speaker had observed two cases, one where the nail had been improperly cut, and the skin broken; several days afterwards the nail had begun to grow in. In the other case, that of a young man who had his nails attended to in a bathing establishment, suppuration had set in eight hours afterward. This pathogenic knowledge, said the speaker, had an important bearing in relation to the treatment; if ingrowing nails were properly cared for at the beginning, they were easily cured by constant bathing in carbolized water and by antiseptic dressings.—*N. Y. Med. Jour.*

The Tendon-Achillis Phenomenon.

Ziehen (*Deut. med. Woch.*) concludes a discussion on this subject based on a large number of cases. He has found that out of one hundred and eighty-eight general paralytics this tendon-Achillis, or ankle jerk, was normal only in fifty-seven. An inequality between two sides was very common. The gradual diminution and disappearance was actually observed. Sometimes the loss of this tendon reflex was an early symptom. The knee-jerk is not always absent at the same time Thus in twenty three cases the knee-jerk was present, and yet the ankle-jerk was lost on one or both sides. The loss of the ankle jerk is very uncommon in functional psychoses or neurasthenia, and the author does not believe that it is often absent in health. Once the jerk unquestionably reappeared under vigorous mercurial inunction. Foot-clonus is very common in general paralysis, but is of no diagnostic significance. A one-sided or double-sided weakening of the ankle-jerk is strongly in favor of general paralysis as against functional psychoses. It will not serve to distinguish general paralysis from senile dementia, cerebral syphilis, or chronic alcoholism. In senile dementia it was altered in thirty cases. In secondary or

congenital imbecility it may point to congenital syphilis as a cause. Foot clonus and unequal ankle-jerks are more common in hysteria than in epilepsy, the increase being on the side of the hemi anesthesia. In chronic alcoholism diminished or absent ankel-jerk was commoner than foot-clonus. Absent ankle jerk on one or both sides is very uncommon in functional psychoses or neurasthesia, being present without doubt only in four cases. The author concludes that the ankle-jerk is quite as important as the knee-jerk, that absolute indications are as rarely given by it as by the knee-jerk, that absence on one or both sides is of the greatest importance, and that the loss of it in a mental case points with great probability to general paralysis or syphilis of the central nervous system, or in a less degree to senile dementia or alcoholism. Peripheral complications, such as sciatica, etc., must be excluded.—*British Med. Journal.*

Antipyrine in Laryngology and Rhinology.

Antipyrine has been used almost since its first introduction to the profession as a hemostatic in epistaxis, with marked success, a four per cent. solution being thrown into the nostrils as a spray, or applied upon a pledget of absorbent cotton. Now, the solution is used either as a spray or as a direct application upon any oozing surface. It is unirritating, and unlike those preparations which check the flow of blood by the formation of a clot, it constricts the blood vessels, so that the surface seems blanched, as if all the blood were pressed out. In tonsilitis and pharyngitis, when the pain shoots up into the ears and effects the swallowing, the spray checks the spasm, relieves the pain, and reduces the active congestion.—*N. Y. Medical Times.*

Report of a Case of Acute Supra-Glotic Œdemia Without Apparent Cause.

Dr. John Pryor (*Medical Record*), the patient, a dentist, aged thirty, vigorous and healthy, consulted the author on account of difficulty of speaking and breathing. The trouble came on suddenly in the early hours of the morning, the patient waking up with a slight sense of fulness and discomfort in the region of the throat. Towards the afternoon of the same day the condition became worse; the face wore an anxious expression, and the voice had a peculiar metallic resonance. On examination the epiglotis and ary-epiglotic folds were seen to be very œdematous. The former showed a line of division in the center, which gave the appearance of two large puff-balls. At its base or lingual surface of the right side a large bleb of about one-fourth of an inch in diameter was seen. No view of the interior of the larynx could be obtained. There was also pronounced infiltration of the connective tissues of the neck in the region of the larynx. No pain was complained of. Respirations were eighteen per minute; pulse and temperature normal. Six leeches were applied to the laryngeal region, a hot mustard foot-bath, wrapping in blankets, and copious draughts of hot lemonade and whisky being also ordered. Relief soon followed. The author states that no evidences of cardiac or of renal disease could be found. The following considerations he points out as worthy of careful study: 1. The absence of any known causative agency and constitutional symptoms; 2, the extent of œdema which may occur without marked dyspnœa; 3, the peculiar character of the voice; 4, the marked benefit of prompt treatment without scarification; 5, the possibility of the case belonging to a group of obscure clinical manifestations known as anglo-neurotic œdema or allied vaso-motor curiosities.—*Journal of Laryngology, Rhinolooy and Otology.*

Inflammation of the Middle Ear of Infants.

Dr. A. Hartman (*Deutsche Med. Wochenschrift*) gives the results of investigations of this subject in the Institute for Infectious Diseases, Berlin:

1. Post-mortem examinations and examinations of the ears of living children establish the fact that 75 per cent. suffer from inflammation of the middle ear.
2. Inflammation of the middle ear can nearly always be determined by an otoscopic examination.
3. The symptoms of the otitis media consist of restlessness, elevation of temperature and loss of weight. Sometimes these symptoms are not present.
4. Very often the symptoms of otitis media are connected with broncho-pneumonic processes. Probably both processes are due to the same process, viz., aspiration.
5. Death can result in cases of otitis media, slow stone atrophy, or from an extension of the micro-organisms into the cranial cavity, (meningitis) or into the blood (septicemia).
6. The inflammation of the middle ears of infants must receive treatment suitable for the varying conditions.—*American Journal of Medical Sciences.*

Diphtheria.

Dr. L. Emmett Holt summarizes the treatment as follows:

1. Germicidal treatment, preferable by the use of strong hydrochloric acid, used early to be effectual; especially valuable in cases beginning on the tonsils.
2. Local cleanliness by the use of a weak antiseptic solution in the pharynx.
3. Nasal spraying with the same solution in every case where there is nasal discharge.
4. Alcoholic stimulants begun as soon as the first systemic effects of the poison are seen, and in very severe cases pushed to the point of tolerance.
5. Calomel fumigations as soon as laryngeal symptoms appear.
6. Intubation in laryngeal cases not relieved by fumigations.

Heart Disease and Menstruation.

Dr. Gow recently read a paper (*Lancet*) before the Obstetrical Society of London, with a record of 50 cases. In 28 the flow was unaltered; in 17 the flow was absent or scantier than before; in 5 the flow was either more profuse or recurred more frequently than before; in no case was there good evidence that heart disease gave rise to severe menorrhagia. It would seem that either amenorrhœa or scanty menstruation was a far more common accompaniment of heart disease than menorrhagia. A further analysis of these cases seemed to point to the fact that heart disease led to relative sterility, and also that it greatly increased the tendency to premature expulsion of the ovum. In conclusion, it was pointed out that a large number of women suffering from valvular disease of the heart pass safely through the period of pregnancy and labor. The cases were further analyzed as follows:

1. Mitral stenosis (22 cases): In 9 cases menstruation was regular and the amount lost unaltered, in 5 cases menstruation was regular but more scanty, in 4 cases there was amenorrhœa, and in 4 cases menstruation was either more frequent or more profuse.

2. Mitral incompetence (15 cases): In 10 cases menstruation was unaltered, in 4 cases menstruation was more scanty, and in 1 case there was amenorrhœa.

3. Mitral stenosis and incompetence (7 cases): In 4 cases menstruation was unaltered, in 1 case menstruation was more scanty, in 1 case there was amenorrhœ, and in 1 case there was slightly increased menstrual loss.

4. Aortic incompetence and obstruction (2 cases): In both cases menstruation was unaltered.

5. Aortic and mitral incompetence (3 cases): In all cases menstruation was unaltered.

6. Aortic incompetence and obstruction and mitral incompetence (1 case): Menstrual loss was more scanty than before.—*The Kansas Medical Journal.*

The Pathology of Enlargement of the Prostate.

(*Lancet.*) By C. Mansell Moullin, M.D., of London.

The theories current at present regarding this condition are: 1. That based upon the analogy between it and fibroid disease of the uterus. 2. That it is merely an occurrence in a constitutional disorder which begins as an arterio-sclerosis and ends in fibroid degeneration, affecting the genito-urinary organs in a special manner. 3. That it is secondary to and developed as a compensatory measure to primary changes in the bladder.

These three theories are disproved by the following facts: 1. The prostate is not homologue of the uterus. 2. Uterine growths originate as fibromyomata and have little or nothing to do with the mucous membrane; neither does the enlargement begin as a fibroid degeneration, but as a glandular overgrowth. 3. The prostate is of sexual origin and has to deal only with sexual function. It has nothing to do with micturition, which, if the prostate remains undeveloped or undergoes atrophy, takes place just as if the prostate were normal. There are, however, certain facts which we know that suggest the real cause. The enlargement is dependent in some way upon the testes. The evidence in favor of this is in brief as follows: 1. The normal development of the prostate is undoubtedly controlled by that of the testes. Up to puberty there is no prostate worth mentioning. 2. If castration is performed before puberty the prostate never grows; if after puberty, it wastes and disappears, and the same has now been shown to be true of the abnormal development known as enlargement. This rarely begins after an age at which it may be presumed that the testes are no longer functional, and it disappears if they are removed. There are now nine cases on record in which castration has been followed by a complete disappearance of the enlargement within a few weeks. How the testes act is questionable. The mere induction of sterility (such as by section of the vas deferns,) although it may cause atrophy of the tests, does not appear to be sufficient. The influence, whatever it is, comes from the testes themselves and exists so long as they are present. It may be exerted through the nervous system or through the circulation. Three cases have lately been reported of unilateral atrophy after removal of one testicle. If post-mortem examination of these cases should show this to be true, it is probable that the influence is exerted through the nervous system.

If this suggestion, that enlargement of the prostate is dependent upon some change which takes place in the testes during the latter part of their active life, should be accepted, it will be a curious instance of the way in which modern views are sometimes foreshadowed by the speculative theories of a long past date.

Why People Become Deaf.

It has taken the medical world a great many years to discover that loss of hearing is almost invariably caused by some disease of the throat or nose or both. But very recent researches in these fields have demonstrated this fact beyond question, and it is now admitted by the more advanced medical men that, aside from rupture of the ear-drum, there is scarcely a symptom of defective hearing which is not traceable directly to the condition of the nose and throat.

In view of the new discoveries, ear specialists are finding their occupation gone, save as they make their particular branch an assistant in further investigation. It is said, as we have already pointed out, that the use of smelling-salts is one of the most prolific causes of deafness, operating by weakening the olfactory nerves, and through them the auditory system. All strong or pungent odors should be avoided as far as possible, especially those which act upon the secretory processes, and, as the popular expression goes "make the nose run."—*Medical Brief.*

Heart Surgery Next?

A contributor to the Medical News suggests that the principles upon which wounds in other vital organs are dealt with by modern surgery might often be applied with equal success to the heart. In view of cases on record in which the heart has resisted the effect of gunshot and other wounds for hours and even days, it is at least open to discussion whether a surgeon might not open the pericardium, clean out the clots, and close the wounds in the heart wall, with a chance for the patient of recovery which certainly could not be lessened by the attempt. It is claimed that this is no more improbable now than the safe removal of a tumor from the motor area of the brain seemed to be in the recent past. That the application of sutures would necessarily stop the action of the heart, is not proved; and if it should be, there would remain a question of possibly starting it again. The danger from the entrance of air into the circulation has been proved not so great as has been supposed. Drs. Hare and De Schweinitz, of Philadelphia, who have done much work along the line of experimental cardiac surgery, have demonstrated that the intravenous injection of large quantities of air is not necessarily fatal.

Ureterotomy.

In the December number of the *Bulletin* of Johns Hopkins Hospital, Dr. Howard Kelly gives some interesting details of three cases of ureterotomy undertaken for diagnostic purposes. Whilst operating for severe pelvic diseases, he noticed in three of his cases such bulging of the uterus as led him to the belief that one of the uterus had been included in some of the ligatures which had been placed to control bleeding. After locating the ureter over the brim of the pelvis, he cut a slit in it, and passed a catheter through the ureter down into the bladdder in two of the cases, thereby demonstrating that the ureter was previous, and concluding that the dilatation was probably due to pressure upon the ureter by the tumor which he had just removed. In one of the cases he found, as he suspected, that one of the ureters was included in a ligature. This he cut, after which he could pass the catheter freely into the bladder. The slit in the ureter he repaired by mattress sutures. In one of the cases there was leakage of urine, which, however, was controlled by superficial sutures. Care has to be taken not to make the sutures pass into the lumen of the ureter. In these cases the operation on the ureter had no untoward effect upon the patients, recovery having been uninterupted in each case.

Blood-Letting in Over-Distention of the Right Heart.

Dr. I. E. Atkinson, of Baltimore (Maryland *Medical Journal*), thinks that blood letting, in this condition, is of the highest, at times, of life-saving usefulness. Mechanical relief is afforded by the abstraction of blood in cases where the right side of the heart becomes engorged or over-distended, in consequence of increased obstruction to the flow of blood through the lungs, or left side of the heart, as may be seen in severe bronchitis, emphysema, pulmonary œdema, incompetency of the mitral valves, or stenosis of the mitral orifice. In some cases where there has been mitral disease, and the hypetrophy is followed by dilatation and degeneration, the heart may be too much diseased to avail itself of the relief coming from venesection. In cases where the right ventricle becomes suddenly distended beyond the power of its systole, in acute bronchitis is an emphysematous lung, marked benefit comes from blood-letting. The feeble action of the right ventricle is rapidly relieved by this means. The balance of the circulation is greatly improved. The veins are emptied, and more blood flows into the arterial system. The systole of the right ventricle again becomes efficient, and the cyanosis disappears. In advanced cases of mitral disease the benefits are often temporary. In pulmonary œdema and engorgement very brilliant results may be obtained. As the blood flows from the arm the patient feels marked relief. The dyspnœa subsides; the cyanosis lessens; the pulse grows slow and fuller. The patient usually falls into a quiet sleep. From one to two pints may be taken with safety. The author mentions a case where the patient had ceased breathing. He resorted to artificial respiration and venesection. When half a pint had escaped respiration began. The patient made a good rocovery.

Treatment of Typhoid Fever.

Dr. Osler, of Baltimore, in discussing the treatment of typhiod fever at a recent meeting of the Clinical Society of Maryland, said: He thought that the antipyretic drugs were entirely superfluous in this disease. The cold bath is more efficacious, but is not always available in private practice; but all the good effects of the bath can be obtained by sponging. A good nurse or doctor can sponge the patient so effectually that the fever will be satisfactorily reduced. When the temperature is high, ice sponging—not with ice water, but with lumps of ice—over the back and legs will reduce the temperature very pleasantly to the patient, and satisfactorily to the doctor. Delirium and stupor are also effectively treated by ice sponging. The use of modern antipyretics in typhoid fever is, in nine cases out of ten, positively hurtful. They reduce the heart's action, and cause weakening sweats, and their use is an unmitigated evil. In the majority of cases the treatment may be taken from old Dr. Nathan Smith, of Yale, which was pretty much that of to-day: Plenty of fresh air, liquid diet, and cold externally. He was in the habit of turning out the friends of the patient, putting the patient on the floor, and then dashing water, handed through the window by an assistant, over the patient.—*Canadian Practitioner.*

The Hygiene of the Kidney.

Dr. J. Henry C. Simes, of Philadelphia (*Diet. and Hyg. Gazette*) deals with the care of the kidneys. He calls attention to the relation between the skin and the kidneys, and observes if the skin is not in a healthy condition the kidneys have an extra volume of work to perform. The importance of a healthy action of the kidneys is manifested by the fact that serious trouble may arise in other organs, as heart, lungs, brain and nervous system, when the excretory work of the kidneys is imperfectly done. In watching the action of these organs many factors must be taken into consideration, such as the nature of the diet, the amount of liquids consumed, the nature of the exercise and activity of perspiration. Then again, as the urine varies so much, a correct examination cannot be made unless the entire amount voided in twenty-four hours be collected, and a specimen taken from this. The quantity of urine varies greatly with the amount of liquids holding the solid constituents of the food in solution. When it is remembered that nine hundred and fifty parts of every thousand of the urine are water, the importance of this element in the dietary becomes evident. On this point, the author is strongly of the opinion that the majority of men eat too well and do not drink enough water. As a result of this, there is deposited in the tissues many effete products that should be carried off by the kidneys. The work done by those organs is in this way interfered with; and in time organic disease often come on. It is owing to the large amount of water that much of the benefit from a milk diet arises. In advocating the use of abundance of water with the solids, the author again calls attention to the danger of washing down the food with it, and taking time to masticate properly. While water is of prime importance, it cannot take the place of the saliva. The benefit derived from a sojourn at a mineral spring is almost entirely due to the flushing out the system gets. Waste products are dissolved and washed away by the kidneys. The opinion is expressed that pure water drank for a lengthy period would have as good an effect. This of course applies to cases where there is no organic lesion, and efforts are directed against the ill-effects of a sedentary life and over-eating. In advocating the use of water, its excessive use must be guarded against. The habit of taking too much water may be indulged in. This is the other extreme, and may result in harm. The effect of water is to make the kidneys act, and by over drinking these organs may be over worked. The abuse, therefore, of water may prove the reverse of "in aqua sanitas." In the cold season, warm clothing is of much value, as tending to prevent congestion of the kidneys. Should such happen, it must be relieved by acting upon the skin and bowels. Judicious bathing is useful, as tending to maintain the healthy action of the skin, and thereby avoid congestion of the kidneys. If many people drank more water, and used less solid food, kidney diseases would not be so common as they are at present.

Guaiacol in the Treatment of Gonorrhœal Epididymitis.

At a recent meeting of the Societe Medicale des Hopitaux of Paris (*Union Med.*), M. Balzar and M. Lacour stated that they had obtained excellent results in the treatment of gonorrhœal epididymitis with guaiacol. On the skin of the inguinal region, they said, pure guaiacol could be applied; on the scrotum it was better to employ an ointment of from two to five parts of guaiacol to thirty of vaseline. One of the first effects of the application of this ointment was a rather sharp burning, lasting for about ten minutes; then the patient felt a sensation of heat, and almost immediately the pain disappeared, at least for three or four hours, and sometimes it did not return Ordinarily it was necessary to make two applications on the first day, but after the third day there was no longer any pain. The applications were then discontinued, for they did not seem to exert any very decided resolvent action upon the inflammatory infiltration of the epididymitis. It was evident, the authors said, that guaiacol exerted a very clear and energetic effect upon the pain of the disease; moreover it overcame certain of the general symptoms which were due to the pain, for example, sleeplessness. It gave rise to a slight erythema of the scrotum, followed by drying and exfoliation of the epidermis. The authors had treated twenty cases with guaiacol, and in all of them the results had been most favorable and very rapid.

A New Method of Shortening the Tendo Achillis.

Phocas (*Am. Med. Surg. Bulletin*) proposes the following operation:

A median incision five or six centimeters is made over the tendon, the sheath opened and the tendon carefully denuded. It is then transfixed laterally at the upper end of the wound by a bistoury which is carried down the middle of the tendon by a sawing motion. The posterior flap is cut away above and folded on itself, and this is now done, the freshened surfaces together, thus shortening it one-half the length of the incision, and the fold stitched together with catgut. The sheath is closed, and the skin also separately. The foot is then put up in equinus in a fixed dressing.

Treatment of Collapse from Loss of Blood.

In a paper printed in the Texas *Medical Journal*, Dr. A. S. Fuller, of Houston, cites two cases of collapse, due to *post-partum* hemorrhage, treated by the injection of a salt solution into the peritoneal cavity. The first case was a multipara about thirty years of age, the hemorrhage coming on a few moments after expulsion of the placenta, and collapse occurred before the flow could be checked. Stimulants, hypodermically position, and heat failing to have any effect, one and one-half, pints of a hot two per cent. solution of sodium chloride was injected into the peritoneal cavity, and in about three hours the patient was sufficiently recovered to allow the doctor to leave.

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ETIOLOGY AND PROPHYLAXIS OF PULMONARY TUBERCULOSIS.*

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The question of contagion in tuberculosis appears to be still in controversy. The older writers were almost universally opposed to the theory of contagion, and the great Louis, who wrote some fifty years ago, and to whom is due the credit of having made a more careful and elaborate investigation into all questions relating to pulmonary consumption than any other man of the age in which he lived, does not even mention contagion as a cause of the disease. Dr. Thomas Watson, another eminent authority, in reply to his own question, "Is consumption contagious?" says, "No, I really believe it is not. * * * The disorder, I am satisfied, does not spread by contagion." Prof. George B. Wood, in his excellent work on the Practice of Medicine, published some thirty-five years ago, says, "Phthisis is pre-eminently a hereditary disease," and he was in the habit of advising his pupils, before pronouncing a diagnosis in any case of lung disease, to trace back the pedigree of the patient to at least the grandparents, before abandoning the search for some hereditary predisposition of phthisis. He does not allude to contagion, or any specific agency as a possible cause of consumption. Dr. Austin Flint ignores contagion, and leans so strongly to the theory of heredity that he says, "It may reasonably be conjectured that a predisposition may be inherent in the organism of persons none of whose relatives have had phthisis. Indeed, it may be that the diathesis always involves a congenital predisposition, that is, it is never wholly acquired." Dr. Cotton, of the Brompton Hospital for Consumptives, and Dr. McCormac, of Dublin, are strongly opposed to the theory of contagion, and the former goes so far as to say that "a residence in the consumptive hospital (Brompton), and a long continued working in its wards, is a good way, indeed, not to catch the disease." This declaration he bases upon statistics collected at his hospital during a period of twenty-one years, showing an exceedingly small percentage of mortality from consumption among the internes of that institution. The much quoted Dr. Williams apparently straddles the question, and while, in the main, combatting the theory of a specific contagion, admits "that a noxious influence may pass from a patient in advanced consumption, to a healthy person in close communication, and may produce the same disease."

On the other hand, M. Villemin, in 1865, after a series of careful experiments on healthy rabbits, announced that tubercle is a virus, and communicable from one animal to another. His experiments were repeated by Lebert and others with results

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that confirm the opinions of Villemin. Tappiener, of Meran, experimenting on dogs, succeeded in producing tuberculosis of both lungs in ten out of eleven of them; and also of the kidneys in most of them, by causing them to inhale the air of a chamber previously contaminated by spraying, with an atomizer, a mixture of tubercular pus with water. The seances were daily of two hours duration, for an average period of thirty-five days. Every physician, of any considerable experience, must recall numerous instances in which persons in good health, without any hereditary tubercular taint, have died of consumption after intimate and long continued association with one sick of the disease; as in nursing a dear friend.

Notwithstanding the negative testimony of Dr. Cotton, we have, on the contrary, the records of numerous institutions, under the charge of the Catholic Order of Sisters of St. Francis, which show a fearful mortality from consumption among these assiduous and devoted nurses. My personal observations, during a period of twenty-two years' service at St. Joseph's Hospital, Reading, Pa., under the management of said sisters, confirms the reports from other similar charities. This large mortality among these sisters from this cause, cannot be ascribed to heredity, since they are not the descendents of any special class or community of people, but represent various classes and nationalities and, therefore, are presumably fair exponents of the average health of the general population.

Nevertheless, fourteen years after the discovery of Villemin, Dr. Henry Hartshorne, in a note to Reynold's System of Medicine, after reviewing the experiments of Villemin, Lebert, Tappiener and others, and after fully discussing numerous supposed examples of infection, states as one of his conclusions, that "Tubercle is not a specific morbid product, and therefore in no strict sense can phthisis be called a contagious disease." However, in the light of recent bacteriologic research, prosecuted with such earnest zeal in almost every part of the world; of the discovery, by Villemin, of the communicability of tuberculosis from one animal to another; of Koch's find of the bacillus tuberculosis, a microbe constantly present in the disease; and of clinical experience; it is difficult to escape the conviction that tuberculosis belongs to the list of zymotic or contagious diseases, and that the Koch bacillus is the pathogenic agent thereof. I cite the opinions of the older authorities chiefly to show how tenaciously the mind clings to old dogmas based upon antecedent authority, and how difficult it is to root up such dogmas even by an array of stubborn contradictory facts.

But, laying aside the statement of facts and statistics, what conclusions can we come to in regard to the contagiousness of consumption by a process of reasoning? It cannot be denied that the disease is governed by the universal law of cause and effect; being an effect, it must have a cause, and this cause must be either intrinsic—be inherent in the individual, or come from without. Now, if the disease were universally hereditary, as has been contended by Flint, it would be liable to spontaneous extinction, under the two laws of "natural selection" and the "survival of the fittest." Under natural selection because marriageable young people are inclined to shun conjugal relations with those who are afflicted with, or manifestly predisposed to the disease; thus diminishing the opportunities of propagating phthisical offspring. Under the survival of the fittest, because the average age of consumptive women at death is only about thirty years, and from the marriageable age to that of thirty, they cannot bear as many children as healthy women do up to the age of the menopause. And, besides, of the children they do bear some would die of tuberculosis, in addition to the usual mortality from other causes, before arriving at the age of maturity. For these reasons it would follow, as a natural consequence, that the ratio of the consumptive to the healthy population would diminish in each succeeding generation, until the disease would become extinct in the human family in the lapse of ten or twelve generations; this has not been the case.

But the anti-contagionists contend, further, that the predisposition is inherited in only about thirty-three per cent. of all cases, while in the remaining sixty-seven per cent. it is acquired by the operation of such causes as imperfect nutrition, vitiated atmosphere, depressing mental emotions, excessive venery, intemperance, etc., and, in fact, any cause that will lower the vital

energies. But predisposition, whether inherited or acquired, is not a disease; it is simply a condition of diminished resistance in the economy to the aggressive operations of pathogenic agencies. If tuberculosis were an affection developed fortuitously, and not dependent upon any specific extraneous cause, this condition of diminished resistance would be just as likely to develop typhoid fever, diphtheria, or smallpox, as phthisis, because these maladies also thrive best on conditions of lowered vitality. But no one would allege, in this age, that smallpox or scarlatina are of spontaneous development.

Having accepted the theory of contagion and the communicability of tuberculosis, the subject of prophylaxis becomes invested with an increased and all-important interest. It is a problem as broad and intricate as the disease is widespread and insidious, and involves a radical disturbance of many existing domestic, social and financial relations and usages. Realizing the importance of the subject the profession, as well as boards of health and other legally constituted sanitary authorities, are rapidly adopting both advisory and compulsory measures of prevention.

In order to acquaint myself with the work done up to this time by some of the principal cities of our country, in the matter of prophylaxis in phthisis, I recently addressed letters of inquiry to the secretaries of the boards of health of the following cities: New York, Philadelphia, St. Louis, Baltimore, Washington, Buffalo, Cleveland, Detroit, Chicago, Cincinnati and Boston. From New York, Philadelphia and St. Louis, I received printed literature on the subject, consisting of rules, instructions and advice to the profession and laity. From the next five cities the replies were that they had taken no steps in the matter, and from the last three there were no replies.

The literature issued by the first three named cities is based upon the theory of the communicability of consumption, and the preventive measures recommended in the circulars, are chiefly intended to guard against the inhalation of dust arising from pulverized dried sputa of consumptives. Other sources of infection are barely mentioned, and the public is lulled into a sense of false security, by being advised to guard only against one channel of infection when others remain unguarded. The New York Board says: "This matter, spit upon the floor, walls, or elsewhere, is apt to dry, become pulverized and float in the air as dust. The dust contains the germs, and thus they enter the body with the air breathed. The breath of a consumptive does not contain the germs, and will not produce the disease." The Philadelphia Board says: "There is no danger from the mere breath of a tuberculous patient. The risk is from dried expectoration." Medical writers, through our numerous journals, reiterate substantially the same views; namely, that the chief danger of infection lies in the inhalation of dust arising from the pulverization of the dried sputa of consumptives, and that tuberculosis could be easily stamped out if the sputa was scrupulously collected and destroyed.

While I fully admit the great danger from the inhalation of contaminated dust, as described, I also contend that tuberculosis can be communicated by the breath of a person whose lungs are affected by the disease. Not by the breath of ordinary and tranquil respiration, but by the breath in coughing. Let us see how this may happen: the act of coughing consists of several distinct processes; 1st, a long and full inspiration of air; 2nd, closure of the glottis and epiglottis to retain this air; 3rd, a powerful contraction of the muscles of expiration, placing the air in the lungs under a heavy pressure; and, 4th, a sudden opening of the glottis and epiglottis, accompanied by a forcible but momentary explosion of a blast of compressed air; and then a succession of sudden closures and re-openings of these organs, until the entire volume of compressed air in the lungs has been expelled in a series of forcible jets, carrying with them the offending matter in the air passages. This is followed by other full inspirations and the succeeding spasmodic expiratory blasts until the paroxysm of coughing comes to an end. The flapping movements of the epiglottis, the rapid vibrations of the vocal bands and mucous membrane of the larynx together with the friction of the forced jets of air, lash a large quantity of the escaping pus into a spray or mist which is blown into the apartment of the invalid. In other words, the human larynx, during the act of coughing, is a living atomizer or nebulizer, by which the atmosphere

surrounding a consumptive person is constantly impregnated with atomized pus, carrying with it myriads of tubercle bacilli. This spray floats like a mist, and is wafted about the sick-room by every movement of the attendants, bed-clothing, curtains, fans, etc., and is, of course, inhaled, to a greater or less extent, by every person occupying the apartment. Being moist and fresh from the diseased lungs, it is far more infectious than the dust from dried sputum, in which many of the germs of the disease have lost their vitality by long continued desiccation. When we consider how incessantly the paroxysms of coughing occur in many cases of phthisis, and how, in almost every act, some pus is expelled from the larynx, it is no stretch of the imagination to conceive of the sick chamber of the consumptive to be literally filled with a mist of atomized infection.

Both the Boards of Health of New York and Philadelphia declare, in their circulars to the laity, that consumption can be largely prevented by simple and easily applied measures of cleanliness and disinfection, and have formulated a system of very excellent rules of asepsis and antisepsis, in the treatment of the sputa; but in omitting a warning against the danger from the inhalation of atomized pus, invisible to the unaided senses, they tend, as before stated, to delude the public into a false sense of security, while yet in the midst of great peril.

In view of the results of the experiments of Tappiener and others, in communicating tuberculosis to the lower order of animals by simply causing them to inhale an atmosphere impregnated with atomized phthisical pus, the possibility, and, indeed, the great probability of the disease being propagated from man to man, by the breath, should not be ignored. This channel of infection has hitherto been either unsuspected or overlooked, and it behooves our sanitary authorities, as well as the profession, to warn the public against it. The subject is certainly worthy of further investigation, and it is with this view that I humbly suggest it to the consideration of my fellow members of this Association.

By prophylaxis we understand the practice of all measures to prevent the occurence, and arrest the progress of the disease. Regarding consumption as a zymotic disease, engendered by a pathogenic microbe emanating from an affected individual, *isolation* is obviously the most effectual prophylactic measure. But, as man is a gregarious animal, perfect isolation is impossible, because it would imply that every affected person should live the life of a hermit. Isolation by segregation, then, becomes the next best method. Separate wards in hospitals, almshouses, and other eleemosynary institutions, as well as hospitals for the exclusive use of consumptives, could be established. Under a more enlarged and comprehensive application of this idea, communities of consumptives could be organized. If legislative bodies possess a constitutional right to appropriate the public funds, which few people now doubt, for the establishment of asylums for the insane and epileptics, with the view of protecting the community against injury to the person and damage to property, surely the commonwealth would have an equal right to establish homes and communities for consumptives, to protect its citizens against the ravages of this fearful scourge —tuberculosis.

An ideal institution of this kind would embrace, in the first place, a large tract of land in some healthful locality, upon which, as a nucleus, a home for these invalids could be erected, which would, by more or less rapid accessions, develop into a community. The land would afford ample opportunities for out-door exercise in various agricultural and horticultural pursuits; and for the organization, from time to time, of small industrial establishments for the employment of such of the inhabitants as were skilled in the mechanic arts. In this way the institution might be made to become almost self-sustaining. This would, however, be only a trifling consideration compared to the more important results that would accrue from the isolation of the sick from the healthy; from the excellent hygienic advantages afforded to the inmates; from the superior facilities for the practice of asepsis and antisepsis; and from a more systematic and methodical therapeutic treatment than is usually followed, at least among the poor, in private practice.

Domestic relations would necessarily in most instances have to be disrupted, but this disadvantage would in a great measure, be compensated by the establishment of

pleasing social diversions; and life in such a community would not be nearly as forlorn and dreary as might at first thought be supposed. Many perplexing questions would, no doubt, present themselves in such an enterprise, which only time and experience would enable us to solve; but the experience we have already obtained in conducting asylums for the insane and other public institutions, would be an invaluable guide to us.

Ventilation, probably, comes next in importance to isolation as a prophylactic measure. Recognizing as the two chief sources of infection the nebulized pus and the dust from pulverized pus, both of which are almost as evanescent as air itself, it is evident that a frequent change of the air in the apartments of the sick would greatly reduce the danger of infection; besides affording the vitalizing influence of pure oxygen, and averting the baneful effects of carbonic and other expiratory gases. The old-fashioned open chimney-place, with a grate-fire, stands at the head of ventilating devices for dwelling-houses; where this is not available, a large flue with a wide funnel-shaped opening, pendent from the ceiling or projecting from the wall, having a heated stove-pipe running along the axis of the flue to create an upward current, would answer as an efficient substitute. Into either of these devices, a tide of air is constantly converging, and if the invalid's bed, or chair, were so placed as to enable him, while coughing, to simply direct his face toward the open mouth of the ventilator, the nebulized pus, at least, would almost all be carried out of his apartment.

The importance of asepsis, as at present generally taught, in carefully collecting and destroying by fire, all the visible and tangible purulent expectoration, and other measures of scrupulous cleanliness, cannot be overestimated. Neither is diligent antisepsis, by various agents and methods too numerous to recapitulate here, of much less importance. By this measure we not only destroy the contagion deposited upon the walls, furniture, clothing, etc., in the shape of nebulized pus, but also that of dust which will arise notwithstanding the most careful asepsis.

It may be rash to prophesy that the time may come, and it is to be regretted that it has not yet come, when the infant science of bacteriology, aided by chemistry, will discover some volatile and diffusable agent which will be germicidal to the bacillus tuberculosis but innocuous to human life and health. The hope that such a discovery may yet be made is not altogether visionary; but until it is made, it appears to me that there is no certain way, except perfect isolation, of escaping the danger of infection in pulmonary tuberculosis, from the inhalation of atomized pus, unless it be by artificial immunity.

Prophylaxis by the conferring of immunity is a theory which is at present gaining great favor in the profession. Nature is constantly reminding us of and trying to teach us this principle of immunity, by showing us, in our daily observations, how, in the case of a number of contagious diseases, one seizure produces an immunity against another. Long before the time of Jenner, the profession utilized this principle by the practice of inoculation against smallpox. Jenner improved upon this practice by using the virus of variola only after modifying it by passing it through the blood of the cow, and thus securing the inestimable advantage of depriving it of its variolous contagion.

For upwards of a century after Jenner's discovery of the vaccin virus, until Pasteur's announcement of his antitoxins for anthrax and hydrophobia, the profession rested almost in a state of lethargy in relation to the evolution of the principle of immunity. With a knowledge of the existence of natural and acquired immunity, and of the protection afforded against smallpox by vaccination, it is surprising that science was not stimulated to make any advances in this direction during so long a span of years.

Professor Koch's world-famed tuberculin, although it has failed to sustain the claim originally made for it, as well as the recently introduced diphtheria antitoxin, are important steps in the direction of prophylaxis by immunity. The antitoxins, it is true, are intended to cure diseases; but it is evident that if they should prove antagonistic to the morbific agents already developed in the economy, they would prove equally effectual in inhibiting their inception, and thereby confer immunity. The theory of artificial immunity appears to be a plausible one; and although many failures may yet be expected in the numerous experiments now

in progress and hereafter to be inaugurated, the scientific mind has been thoroughly aroused to the importance of the subject; and it is hoped, as well as believed, that the time is not very remote when many of the contagious diseases, especially the fearful malady under consideration, will be shorn of their power to devastate whole families, communities and nations.

CONTRIBUTIONS TO THE STUDY OF THE ETIOLOGY OF HEPATIC CIRRHOSIS*.

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I have collected, during the last two years, fourteen cases of vascular cirrhosis of the liver, and in ten of them there is a history of alcoholism. The opinion, therefore, that alcohol is of importance in the etiology of cirrhosis seems justified, apparently, but only apparently. One remark ought to be made in the beginning. The use of alcohol is, at present, so wide spread that among adults, men especially, one can scarcely find ten per cent. who do not take it. It is not surprising that alcoholism should be often noted in cases of cirrhosis.

Of our fourteen cirrhotics, thirty per cent. do not take alcohol at all. Of the ten alcoholic cirrhotics, we must consider that five only have really abused alcohol. For example, one of the patients, the janitor of an apartment house, has used alcohol only during the last nine years, being now thirty-nine, and in doses of only one one or two small glasses of *eau-de-vie* occasionally before dinner. Again the wife of a shoemaker, aged thirty-eight years, married at the age of eighteen, who, during the first few years of her married life, and then only on visits, has used alcohol to the extent of five or six little glasses, once or twice a month. Also a bookbinder who, from time to time, drinks a few little glasses at great festivals, or when in company, and who has rarely gone so far as to drink half a bottle. Also a cook drinking *eau-de-vie* to the amount of a bottleful in a whole day, once a month after a washing, who has never been drunk and who, for the last seven years, after ceasing to do washing has not drunk at all. Finally, a terrace-maker (sodder?) who would drink every day, after hard work such as laying turf, a cup of tea with *eau-de vie*. This last is the only case in which the use of alcohol verges on abuse.

But what is much and what little, with regard to alcohol? It cannot be measured in numbers of glasses. For one a small glass is an abuse, for another it signifies nothing. Our sodder belongs to a class of peasants whose use of alcohol is more or less habitual. His father drank *eau-de-vie* moderately, and he has doubtless acquired by heredity a certain immunity against the effects of alcohol. He has never been fuddled by his cup of *eau-de-vie*, and rarely, on great feast days, has he become drunk.

Thus, in these five cases, we can not ascribe to alcohol an essential rôle in the production of cirrhosis. The use has been moderate, less than usual, especially if we take into consideration the class of society to which the patient belongs.

Nevertheless, there remain five cases (35 per cent.) in which the abuse of alcohol is irrefutable. But what are the occupations of these patients? Book-binder, janitor of a rooming house, peasant, German mechanic, sodder, inn-keeper, merchant, surgeon's assistant, laborer, cook, a shoemaker's wife, an artisan's wife, and a woman without definite occupation. We must admit that among a similar class of people we would scarcely find less than thirty per cent. who abuse alcohol. Consequently, the percentage of those among the cirrhotics who abuse alcohol scarcely exceeds that among healthy persons of the same class.

Of the five persons who might be said

* From Archives Generales de Medicine. Translated and condensed by A. L. Benedict, A.M., M.D., Lecturer on Digestive Diseases, Dental Department, University of Buffalo.

to abuse alcohol, there are only three whose abuse is carried to high degree, and, curiously enough, in these three cases the hepatic and abdominal symptoms are unimportant. With the peasant, for example, (aged fifty-nine years) nervous symptoms were the most marked (a state of exaltation, extreme tremors, insomnia), while the ascites was very slight and disappeared entirely within five days after admission to the clinic. The liver was very slightly diminished in size and the spleen was not hypertrophied.

In the case of a women, aged fifty-one, without regular occupation, the symptoms were cardiac, and on admission she had no ascites, but it had been present six months earlier. The disappearance of ascites on treatment in another hospital and other symptoms, showed that the ascites depended on a failure of cardiac compensation. The liver is perceptibly enlarged—a fact explicable as part of the same mechanism.

In the most marked case of alcoholism—the merchant, aged thirty-two, whose mother had when he was six years old, begun giving him daily two teaspoonfuls of *eau-de-vie* for his health, and who has drunk a bottleful a day since the age of fourteen—there were symptoms of delirium and of multiple alcoholic neuritis, but a merely incipient cirrhosis of the liver. In the history ascites is not mentioned, and on admission there was only a slight amount of fluid, which soon disappeared. These cases support the proposition that alcohol has no more action on the liver than on other organs. We must bear in mind that the latest and most carefully conducted experiments on animals, have not given a single result in the way of producing an alcoholic cirrhosis. (Strassmann, Aphonassiew, Kahlden.)

Let us now investigate the other etiological factors in the production of cirrhosis of the liver,—syphilis, malaria, etc. These are as follows:

Artisan's wife,—dwelling in a damp basement.

Surgeon's assistant,—a series of acute affections; three weeks of malaria twenty-two years previously; typhus thirteen years ago; during the last seven years, frequent attacks of dry bronchitis. In clinic, there was found a very slight specific lesion at the apex of the lung, and a dry cough without mucus. During his sojourn in the hospital, his temperature very rarely rose two or three tenths, above 37° C. (98.6—99. F.)

Workman,—malaria ten years before; cold and damp dwelling. His cirrhosis was atrophic.

A case in which the use of alcohol was moderate,—rheumatism.

A similar case, — painful mental conditions.

The etiology of hepatic cirrhosis is very similar to that of numerous other diseases. We must conclude that every external evil influence can become a cause of cirrhosis, and that the same evil influence can become the cause of an entirely different malady, or may exist in perfectly healthy persons. We must, therefore, suppose an internal cause or predisposition, acting with the external cause. Ordinarily it is the organism as a whole that is in a state of greater or less vulnerability, according to the greater or less activity of the vital processes. However, all the organs do not participate in the disease to the same degree; such and such an organ presenting a high degree of susceptibility, while another is scarcely affected. Rarely, however, is a single organ diseased. In the particular class under discussion, it is very uncommon to find a cirrhotic liver with no other organ diseased. It must be noted that, owing to the compensatory power of the various organs, there may be a history of health up to an age considerably later than the time of the beginning of the lesion. We must bear in mind in estimating the beginning and the course of the case of hepatic cirrhosis, that the disease antedates, by far, the appearance of ascites, which really marks the beginning of the end.

In five of the cases, there is evidence of hereditary influence. The janitor, aged thirty-nine, was the next to the last child of a man who was a great drinker. Before his military service his health was fair. During his military service in the Turko-Russian war, while about Mt. Caucasus, he had malaria, an acute nephritis and a return of the malaria which, in spite of medical attendance, lasted till after the close of the campaign. After his recovery he settled in Moscow, obtaining a position as janitor—a great change from his peasant life—and married. He had been addicted to no excesses, and did not begin

to drink even moderately, till he was thirty. There was nothing unwholesome about his life except that it was not what heredity and habit had fitted him for. At thirty-nine, three years after the beginning of ascites, he presents a well-advanced cirrhosis.

Case 2. The father and mother of the shoemaker's wife were heavy drinkers, the father having shown œdema of the legs and face for several years prior to his death, which, at the age of fifty-five, occurred suddenly in the street. The mother developed ascites six months before her death. Of twelve children, only three remain. The patient from an early age showed the influence of bad heredity by weakness. Married at eighteen; the first sixteen years of her married life were pleasant enough and the use of alcohol was very moderate. During the last four or five years her husband has taken to drinking heavily, their losses have been severe and she has been greatly depressed. She has had ten children. Here, the external conditions really seem insufficient to produce such troubles as cirrhosis of the skin, a considerable decrease of tissue change throughout the organism, enteritis, arterio-sclerosis and, finally, cirrhosis of the liver badly compensated for; and all this at the age of thirty-eight. In this case better than in many other examples, we can recognize the rôle of hereditary weakness of the system; the hereditary predisposition to various maladies in the development of such and such extrinsic lesions and, in particular, of the congenital predisposition on the part of the liver. It is interesting to note certain anatomical indications of degeneration in the great toes; the metatarso-phalangeal articulations forming a boss on the inner side of the foot. The same anomaly occurred in the father and the oldest brother of the patient. Of her ten children, only the three oldest survive and all of these are in a satisfactory state of health.

Case 3, was that of a noble lady, aged twenty-five. Her father was syphilitic; several ancestors on the mother's side had died with heart disease. From early childhood there was a history of bad health, including diarrhœa, anæmia, furuncles, abscesses, arthritic pains, headaches, etc. She was married four years ago. Three years ago she had an attack of acute nephritis and, the same year, a miscarriage. Otherwise she has remained sterile and showed by the lack of development of the breasts, the anteflexion of the uterus and the conical cervix a failure of maturity. On the foundation of the hereditary syphilis, there was the arthritic diathesis with the cachexiæ mentioned.

Case 4, was that of a laborer with well marked cirrhosis at twenty-eight. His father is a heavy drinker; his mother and a sister died of phthisis; he is the only survivor of six children, the rest having died at an early age. At ten, he had malaria lasting four or five months and recurring occasionally. At the autopsy, it was found that his heart was of only half the normal size, and the liver weighed but 950 grams. This could not be explained solely by the cirrhosis, which involved only the left lobe. There was a genuine failure of development of both heart and liver.

Case 5, was the case of the surgeon's assistant, aged thirty-six. In spite of the absence of alcoholism, he presented an imperfectly compensated cirrhosis of the liver, enteritis, hemorrhoids, emphysema, dry bronchitis, an incipient tubercular lesion in the apex of the right lung, a considerable cutaneous cirrhosis and arterio-sclerosis. A considerable degree of anæmia developed during his stay at the hospital. All this is inexplicable if we bear in mind the external causes only, but it is readily explained by the heredity. His father is a heavy drinker; his mother, after aborting once, as delivered of three children. One was addicted to onanism and died of phthisis at the age of twenty-three; the second is a woman of forty, at present in bad health, with a chronic cough and nervous symptoms; the third is our patient. In the history we note a succession of acute diseases and rheumatism. In short, a predisposition to all sorts of inflammatory processes.

In the following cases heredity is not established as a cause of the hepatic disease.

Case 6, is that of the binder, aged thirty. He shows cirrhosis of the kidneys, vessels, myocardium and lungs, as well as enteritis, œdema of the lower extremities and considerable anæmia. Though married, he has no children. Regarding his parents he can give no definite information, but the existence of a hereditary weakness is manifest.

Case 7, is that of the inn-keeper, aged forty. At twenty-five he was a coachman; for the last several years he has enjoyed prosperity. Yet, at forty, he is an invalid, worn out, emaciated, with a considerable emphysema, a confirmed cirrhosis badly compensated, with slight œdema of the malleoli and with arterio-sclerosis. The external causes, including the use of alcohol, are insufficient to explain his condition. We must recognize a constitutional enfeeblement of congenital origin. At eleven he had an inflammation of submaxillary ganglia with suppuration. He married at the age of eighteen and had four children, of whom three have died at an early age. By a second wife he has had three children, of whom two are dead. During his entire life he has been subject to indefinite rheumatic pains. Although we may recognize the causative action of alcohol in his affection, we must also bear in mind that from the age of fifteen he has lived a life entirely different from that of a peasant for which heredity fitted him, and that he has had a superabundance of nourishment and an almost complete absence of physical exercise.

Case 8, is that of the woman without definite employment, aged fifty-one. She has a universal atrophy, including cirrhosis of the liver and kidneys, emphysema, sclerosis of the skin and endocardium, and an arterio-sclerosis of high grade. Thirty-six years ago she had a six months' attack of malaria; fifteen years ago, two acute attacks; she has used alcohol moderately since the age of twenty. As a child she was sickly, and had much trouble with intestinal worms, which cause no serious trouble in a healthy person. At fifteen she had anæmia with headache, vertigo, etc. For the last four years of her life she has lived in a cold, damp place, without means to support herself in comfort. Her organs were evidently in a diseased state when she began her life of poverty, the hard conditions of the last few years serving to bring the symptoms into prominence.

Case 9, the wife of an artisan, forty-one years of age. From her nineteenth to her twenty-seventh year she lived in a basement; at the age of thirty-four failure of compensation was evident. Her condition is that of Case 6, with the addition of colitis and pleurisy with marked dropsy. A congenital enfeeblement is apparent; at fourteen, after her second menstruation, she had acute nephritis; while during her abode in the basement she suffered from continual headaches. Toward the end of each pregnancy, her feet would swell. Pregnant ten times, she aborted five times, and of the five children born alive, two died early. She states that the other three are alive and well. She had sixteen brothers and sisters, of whom twelve died early, and another at thirty-four of an acute mental disease. Evidently the family is tending to become extinct in one or two generations.

Case 10, is the merchant, thirty-two years of age, already referred to as having abused alcohol from an early age. His brother is also a drunkard, and this fact points to a hereditary weakness. His symptoms showed themselves only a year ago when a sudden reversal of fortune, in which he lost about $20,000, was almost immediately followed by loss of compensation. In addition to the hepatic trouble, he has cirrhosis of the kidneys and a moderate arterio-sclerosis.

Clean Thermometers.

Those who are constantly preaching the germ causes of disease are the very fellows who many times are equally as careless as their unbelieving friends. How frequently do we see physicians take the temperature of their patients, regardless of the existing disease, wipe the instrument with their handkerchief, which is the most liable linen to be full of germs, or a towel, or even use the sheet, and carefully place it away in a case prepared with a small amount of absorbent cotton in the bottom to keep from breaking, and unintentionally preserving the germs from time to time, to be conveyed to the next unfortunate, who may be the first patient called upon. This seems to be a very simple thing to discuss, but any reasonable person can readily see the necessity of having his thermometer thoroughly cleaned every time it is used. It should be washed with soap and water, and if any cotton is used in the botton of your case, let it be sublimated cotton and occasionally renew it.—*Charlotte Med. Jour.*

Ice applied to the external genitals (the scrotum in men and the labia majora in women) controls epistaxis and hæmoptysis.

PRECAUTIONARY MEASURES AGAINST PUERPERAL CHILL.

M. F. McTAGGART, M.D., NAPA, CAL.

Considering this subject, the questions present: How far are we justifiable in employing measures for the prevention and elimination of septic deposit during and immediately after parturition? Should intra-uterine injections be resorted to?

Regarding the "Germ Theory" as a logical basis for provisionary expedients against disease; drawing deductions from accumulated knowledge resulting from scientific investigation of the existence of bacteria; accepting the postulate pursuant to the greater mass of the medical profession, that bacilli engender and propagate all infectious and contagious maladies; we are only moving upon the plane from which we receive the impetus, when we resort to intra-uterine injections immediately after childbirth, and such other methods as shall here be advocated to preclude the danger of septic infection during the puerperium. In doing so, I am conscious of the fact that I conclude and act against the brunt of much opposition; though with some concurrence of the best medical authorities.

We have either to consider the element of putrescence as a living germ, *i.e.*, that it is an established fact as such, or we must deem it out and out a nonentity. That it is not the latter, is evidenced by overwhelming proofs of its prevalence in every sluice of contamination. Science tells us it is everywhere. No part of the parturient room, carpets, drapery, bed or sheeting is exempt from it. It is on all parts of the body and is in the vagina.

In the face of these facts, many able physicians, while admitting the truth of the dictum, dispute the propriety of the very remedies or proceedings that are most liable to reach or exclude them, basing their objections upon the suspicion that the benefits to be derived by the precaution will fail to compensate for the injuries that such treatment is liable to produce by acting as an irritant or foreign substance. While others who are convinced of the utility of some such radical measure as a preventive of sepsis, are slow to recognize its application because of similar apprehensions.

We know, however, that when debris of any kind is pent up in the womb, it forms a nucleus for germs, whether it be a portion of placenta, blood-clot, or serum held in the contractile tissue, or whether it be extraneous matter conveyed by the fingers of physician, nurse, or other medium; and that chills, fever and all the symptoms of blood poison, or rather septicæmia supervene. Then it is that the womb is invaded with impunity through forcible dilatation, with thorough drenching and even curetting, with marked benefit. The patient receiving considerable punishment at a time when her life is already menaced by a very exhausting disease. Why then, immediately after delivery, when the uterus is uncontracted, when impurities are being thrown off, when all conditions not only invite but facilitate precautionary steps, why then should we hesitate, upon a mere suspicion of its influencing the mother unfavorably, to avail ourselves of a recourse that should prevent subsequent danger of such grave import to both mother and child.

It has been my practice to act according to the belief that no measure should be ignored nor neglected that gives reasonable promise of immunity from so serious a *morbus* as septic infection; and I am warranted in declaring that every effort in that direction has been requited with ample success. Any one who has met with the accident of puerperal chill—we will call it accident, but I am not sure that it does not deserve the name of criminal negligence—will readily concede the need of more efficient prophylatic measures than those that are usually brought into requisition by the medical profession.

So soon as Koch's developments became patent to science, they were greedily clutched by every aspirant to medical honor. Not so much because of logical presentation, but because the resources of medicine seemed deficient and its achievements offered little more than disappointment or mortification when confronted with grave and serious disorders. The theory seemed possible and the bare possibility offered,

it was hoped, an additional means of accounting for many obscure diseases, as well as suggestions with a trend to save life.

Now, admitting the existence of bacteria as an invulnerable theorem not needing props from any quarter to substantiate it, we recognize the propriety and *absolute necessity* of resorting to such measures as will prevent invasion by them or will destroy them when present.

On going to the chamber of the parturient women, if there be time before the child is born, the nurse is instructed to thoroughly drench the vagina with creolin, lysol, or other sterilized solution, in every part that the syringe can reach by various shiftings of its position. If my presence is needed because of threatened delivery, I frequently repeat this process myself with water as hot as the patient will bear, until the presentation of the vertex implicates danger of flooding the face, which must be carefully guarded against. By this operation the parts are cleansed; the contracted or rigid cervix is dilated; the perineal muscles are relaxed —hence greater protection against laceration of cervix and perineum is secured. It many times prevents the employment of chloroform—which by the way is an excellent agent and one we do not hesitate to use—but by this means its requirement is in many instances avoided, and therefore its unpleasant after effects, which, in some cases, retard the recovery of the patient, or distress her, are obviated. It insures to the parturient a safer accouchment, relieves pain, comforts the mother and secures to the infant exemption from sore eyes—a frequent result of vaginal infection.

Further, it liberates placental adhesion through the engorgement of the utero-placental arteries by reason of liberal application of heat, and their subsequent contraction, a resultant of its discontinuance. Thus facilitating the removal of the placenta, it is more liable to be expelled intact and with much less risk of post-partum hemorrhage. After the expulsion of the placenta to make sure that the uterus shall contain no element of infection, a finger, or hand if necessary, is passed to explore and dislodge, and the organ is then freely flushed with hot antiseptic solution. I use a "Kelly" rubber apron if possible, from the beginning of active labor to its completion, with a view to keeping the patient's robes and bed clean during the whole process, and to leave her so when all is done. This effected, the genitals are dressed antiseptically by cleansing, drying and applying medicated cotton pads. The nurse is instructed to change the dressing and to douche the vagina frequently; occasionally finishing with a large cup of strong coffee as a deodorant and stimulant. This keeps everything sweet and promotes functional activity of low intra-vascular pressure.

Where all the proceedings detailed for conducting accouchments are efficiently carried out, I am satisfied from experience and observation that puerperal fever, eclampsia and the need of forceps, become far less frequent. Besides the mother is not only shielded from the danger of infection, but if lacerations have occurred they will be less in extent and with greater certainty of healing. But unless the hands and everything which comes in contact with the maternal organs be scrupulously clean, such a process will fail of accomplishing the hoped for results. If microbic manifestations appear we have to employ the most active agents the tissues will tolerate to obliterate them. To illustrate the necessity of strict attention to the requirements mentioned, I cite from my notebook, out of many instances, but three cases which, perhaps, will suffice to indicate the merits of the proceedures urged and will attest the value of prompt action in emergencies.

A lady, age thirty-six, mother of three children, had been confined by a midwife two weeks prior to my being called to her sick-bed. I was summoned in haste. I found her with a temperature of 105°. She had no pain. Breasts were yielding thick, green milk, which induced vomiting and enteritis in the infant; respiration was labored; pulse soft and compressible; tongue furred and dry; bowels torpid and urine heavily charged with urates. She thought she had been making a good recovery until within the last three days. Chills, fever and lethargy preceded by insomnia has dictated the need of a physician. Digital examination of the uterus disclosed nothing abnormal; but feeling confident that the cause lay in that organ, the cervix was dilated and a small, fragile, foul-smelling portion of placenta was dis-

lodged. The womb was thoroughly irrigated with peroxide of hydrogen (15 Vol. diluted one half with water) the irrigation being completed with a strong infusion of coffee. In two hours the temperature fell to normal. Second day temperature rose to 101.3°. Irrigation was repeated with creolin solution and the temperature fell to normal. The lavage was continued three days longer, the temperature remaining normal, and patient made a rapid recovery.

Case II.—I was called in consultation to a mother of seven children. Infant was three weeks old and feeding from the bottle. The attending physician admitted having used no special precautions during accouchment, but assured me that the placenta had been removed entire. Her temperature was 103.5°. The breasts were inflamed and nodulated. There was tenderness of the abdomen, and a heavy fetor from the vagina. As we could detect no other cause, it was at once referred to a septic uterus. The cervix was dilated, resulting in the disclosure of numerous minute, friable fungoids adhering to the endometrium just above the os internum, and from which issued a puriform discharge, with an intolerable odor. The uterus was thoroughly irrigated, then curetted and all debris completely flushed out. In a few hours the temperature fell to normal, never rising thereafter but twice. A lavage once a day was kept up for five days, and the patient was up on the seventh day after I was called.

Case III.—A primipara, aged nineteen. Eleventh day after delivery I was summoned by her physician and found temperature 104°; headache; breasts swollen, caked and very painful; cervix and perineum both lacerated. The bowels had judiciously been kept open with aperients. The uterus was tender to the touch, as was also the abdomen, and was suggestive of peritonitis, while the lochial odor was very offensive. Without dilatation, the irrigation, as in the former cases, was resorted to with like results. The lacerations would not heal, however, and were afterward repaired, requiring two different sittings for the operations, the perineum being torn through the sphincter.

In these instances—and I have notes of others, perhaps of greater significance, urging a place in this article—no special care had been taken to protect the patients from infection. There was no possible doubt that septic deposit was the sole element of disturbance, since antiseptic treatment of a radical nature so promptly proved the remedy to save the patients. I know it may be urged, and it is, that many confinement cases do well without any such provisions. In fact, where everything has seemed unfavorable, even to the extent of placing old, dirty rags, portions of soiled quilts—a nest for germs—and all sorts of refuse cloths under the sheet of the woman to absorb the "muss," as is often done. At the same time it may be noted that those cases were in a condition of health to resist the encroachment of microbes, and that a delicate organization or a diseased constitution is more liable to furnish a nidus for bacteria, than a healthful one, and not knowing just where to draw the line of demarcation between such health and disease, it were better to use such precautions in all cases, than to sacrifice one life in a life-time of practice by an omission. It is important that the nurse, too, be instructed relative to these matters, and in leaving a case of confinement or sickness that she should bathe her person in antiseptic solution, fumigate* her clothes and give especial care to her hands. Unfortunately, in families where cleanliness is subservient to the conditions of poverty, the best efforts of physician and nurse may be frustrated and successful results be impossible.

Papain for Tapeworm.

Roberts Bartholow (*Med. News*) reports a case in which, after failure of the usual remedies for tapeworn, a parasite twenty-five feet in length became dislodged and was passed after the use of papain, in ten-grain doses, three times a day after meals. The worm had not undergone solution, but Bartholow thinks the drug had exerted a toxic influence upon it.

* The fumigation may be done by burning a teaspoonful or more of buhach powder on an iron shovel, and under the garments in a closet. This kills all of lower forms of life. A house may quickly be cleared of mosquitoes by burning a little of the powder in the rooms. These insects swell up and die. Flies are not so affected by it; they become intoxicated, however, and drop to the floor where they may be swept up. One of my routine preliminaries in fitting a room for operation, is this fumigation. Touch a lighted match to the powder and it will burn steadily till consumed. The odor is not offensive, nor is the smoke intolerable.

PRACTICING MEDICINE.*

J. McF. GASTON, M.D., ATLANTA, GA.

The invitation of our president to relieve him of a part of his onerous duties on this occasion was accepted in view of the fact that he had labored incessantly during the closing session of our college, not only filling his own hours, but taking the hours of every other member of the faculty who would consent to yield the time to him. I am under special obligation to him for taking my place while I was off duty for a month suffering from the despotic grasp of the grippe.

The great controlling influence with me was, that my venerable chief would be relieved of his burden by a younger member of the faculty. He and I were students together many years ago at the University of Pennsylvania; but it should be remembered that he was one of the oldest and I was one of the youngest in the class. Thus it turns out that with the motto, "*Virtus in arduis*," he is working still, under the accumulation of years, flesh and honors. In the meantime I am renewing my youth with the multiplicity of various duties devolving on me; and we are both striving, in season and out of season, to keep up with this progressive age and our youthful colleagues.

A comparison of the facilities for medical education half a century ago, which passed under our observation, and were noted by us in due form, with what preceded that era, and what has followed, may prove profitable to the graduating class.

My limited time was to be occupied with a strictly professional view of this period, as my distinguished friend who was assigned the duty of making the general address on this occasion, was expected to afford a feast of reason in discussing matters of general interest to this intelligent assembly of ladies and gentlemen. A large proportion of those here to-night have undoubtedly been attracted by the reputation for erudition and eloquence of the Hon. W. C. Glenn, but indisposition prevents his appearance this evening. Not being capable of entertaining this audience with the rich cullings of literature, I shall content myself with briefly noting some matters for the guidance of those who are about to enter upon the practical work of treating the ills which flesh is heir to in this world of pain and suffering.

It may not be out of place at the outset to note that our small list of graduates on this occasion is due, as already stated by the Dean, to the inauguration of a three years' course of lectures, with six months for each session, for graduation in the Southern Medical College.

Formerly our students received the degree of M.D. after two sessions of five months each, and by great diligence and painstaking many of them have attained a fair measure of proficiency in their preparation for the practical work of the physician. But it is evident that by a graded course of three years, in which the first session is devoted chiefly to rudimentary branches, that more satisfactory progress is made subsequently in the higher order of medical education.

The old fathers of medicine in by-gone days, such as Hippocrates, Boerhaave, Galen, Harvey, and their followers, were supposed to know all that was available of the curative art, and, indeed, gave a stimulus to subsequent investigators of great importance. But their work reminds me of a Thompsonian practitioner who flourished in my section during my boyhood days. He had a mania for doctoring his patients with lobelia and cayenne pepper, while they were immersed in hot water baths, in the presence of an old negro woman, who became quite an adept in all the details of the practice. On one occasion when Toney, the husband of the woman, was expatiating upon her great achievements, he remarked with emphasis: "Bless my soul! Mars Dan'l done teach Fanny more than he knows hisself." So it was with those old worthies of early times; they taught the generation which succeeded them more than they knew themselves. At that period all was empirical in medicine, and little was at-

*Address to the graduates of the Southern Medical College, April 3, 1895.

tempted in practice which did not have the sanction of high authority. But gradually the professional dictum came to be set aside, and the physician began to look around him for new fields of investigation. With Harvey's discovery of the circulation of blood a new light dawned upon the medical world, and the fact was impressed upon the observers of results that they were not bound down by the records of the past. Independence of thought and action led to individual investigation; and "thus saith the record" was replaced by a large accumulation of observations in the different fields of medicine.

In the course of events there came forth Bell, Sir Astly Cooper, Goode, Cullen, Marshal Hall, Velpeau, Physick, Valentine Mott, and others no less original and progressive in medicine and surgery.

Among the earliest organized movements for promoting medical education in this country stands the time-honored University of Pennsylvania. It was my privilege to receive instruction there from Chapman, Horner, Jackson, George B. Wood, Gibson, Hodge, and Hare, who were held in high esteem by the large class of students who attended their lectures at that early day.

This was the medical Mecca to which pilgrims flocked from all parts of the United States, and also from other portions of the world, being the great center of medical instruction.

Being impressed with the vast field for advancement in medical knowledge offered at Philadelphia, yet with that State pride which predominated in everything at that day, I was influenced to return to the Medical College of South Carolina to take my second course of lectures, and receive my degree of M.D. A faculty no less distinguished than that of the University of Pennsylvania filled the different professorships at that time in Charleston; and the faithful teaching of Dickson, Geddings, Holbrook, Moultrie, Prioleau and Shepard are vividly recalled by me. In purity and eloquence of diction, the lectures of Dr. Dickson on the practice of medicine have never been excelled; and he was afterwards called to fill the same chair in the Jefferson College of Philadelphia, sustaining fully his high reputation.

Notwithstanding the celebrity of these distinguished professors, which placed them far in advance of the false theories and vain speculations of olden times, it is evident that they had utterly failed to grasp all the principles which lay at the foundation of true progress in teaching.

The advances which have been made in the past fifty years in all departments of medical science, are so stupendous, that should a professor of any branch taught in the curricula of that period be called forth to observe the course of instruction in the better class of our schools, scattered broadcast over this vast field of progressive education, he would stand aghast at the advancement. If the attainments for graduating with the title of M.D. formerly, were compared with the achievements of those receiving the degree of M.D. from our schools of high grade at the present day, the latter-day graduates would be proved to have far greater proficiency in all that pertains to the discharge of their professional duties. I don't hesitate to say that a sufficient number of graduates from the Southern Medical College could be selected each year to fill the professorships in every department more satisfactorily than they were filled by those holding these chairs fifty years ago. Yet it must be remembered that you are only upon the threshold of true progress. If any of us have gained recognition in the medical profession, it has been by dint of diligence in study after graduation, and I would urge upon each of you higher efforts after graduating.

It has been found most conducive to progress in practical attainment for the graduate to spend the first year or two after receiving his degree of M.D. as interne of a well regulated hospital, and these positions are considered so desirable, that some of our medical colleges make the assignment as internes to a hospital, prizes for those who have the best records upon examination. The importance attached to the advantages of securing these appointments is manifested in the number of graduates from our college who have been assigned to duty as internes in the Grady Hospital. My advice to the members of the present class is that any of you who can make it convenient to spend at least one year in this work should take the requisite examination for securing one of those places. I am pleased to note that the Grady Hospital is a well conducted institution.

The grand element of advancement in knowledge offered by the Polyclinic or Post-graduate schools, should enable every new-fledged doctor to apply the instruction which has been received in the medical college, and those who graduated under the old regime had not the facilities for the practical observation of the treatment of medical and surgical patients which are presented in the well organized and splendidly equipped hospitals of the present day. While much has been accomplished by faithful working in laboratories of different kinds and by experiments upon living animals, for the elucidation of biological problems, accurate observations of the progress of disease in the human subject and making records of their data for future reference is far more important to the practitioner.

It is desirable for the graduates to realize that, in receiving their diplomas, they have not learned all that is requisite to acquire for the practice of medicine. In other words, they do not know it all, and it is important that they should know their ignorance. It is thus essential to get a certain amount of knowledge to understand your shortcomings, and to appreciate what further must be learned to fit the graduate in medicine for the proper exercise of his professional duties. You are taught in college all the fundamental principles which are requisite for the degree of M.D., and to qualify the physician to enter upon his work in accordance with the laws of the land. He is fitted thus to take charge of the treatment of cases of diseases, and yet he must inform himself as to what has been done by others under similar circumstances.

Some of you may have read the record of the experience of the lamented Dr. Marion Sims, upon first entering upon the practice of medicine, and his trials and tribulations in undertaking the treatment of his first patient. We must presume that he was well equipped with the teachings of the professor of practice in the medical college where he received his degree of M.D., and yet he was at sea completely in applying this instruction to the case in hand. After reading all the books which were available, his mind was in a state of confusion worse confounded, and he called in an experienced practitioner, to help him out of his dilemma. With similar results in other cases, he became so much disgusted that he resolved to leave that location, tore down his sign, and went to another section of the country. His efforts, after leaving South Carolina, and going to Alabama, were crowned with more success, and, by perseverance, with close application, he ultimately attained such distinction, as to be unequalled by any other member of the profession, at home or abroad.

This affords encouragement to all who may encounter difficulties at the outset, to redouble their energies in overcoming the obstacles which may be encountered, and to continue their studies by reading the best authorities in the different departments of medicine and surgery, after entering upon the practical work of treating diseases. Not only should you study books, but observe closely the practice of experienced physicians, and elicit all the information possible, by getting their advice in consultation. It will not suffice to note the practice of others, but the graduate should study his own cases, and read every available book upon the disease under treatment, so as to select the very best remedies for the case in hand. All the accumulated experience of the best authorities in medicine and surgery is printed in a condensed form, for the information of the members of the profession, who are entering upon the untried field of practice, and you should not grope in the dark, when the light may be turned on, by simply opening the appropriate volume. Do not fail to exercise your rational faculties in determining what is best to do, after you have consulted the highest authorities in the matter under consideration, and each must be his own judge for the occasion.

In a consultation, a few years ago, with a prominent practitioner, who had been engaged several years in the duties of his profession, he remarked to me that he envied my experience as a physician and surgeon. In reply, I told him that all which had been acquired by observation, during a rather eventful life, would most cheerfully be exchanged for the chance to know, with his age, and the opportunity to profit, in future years, by what has been recently brought to light.

You have, then, not simply to pluck the fruit which is ripe, but to take advantage of the growing crop, to reap a magnificent harvest in the future. What

those who have gone before you secured by hard work, by day and by night, is laid before you, to be turned to account in the developments of the near future.

The gradual but steady enlargement of the field of medical investigation, corresponds to the tension of a watch spring, which sets out with a small coil, and by subsequent turns, grows larger and larger, and extending from the outer circle, it is connected with the intricate machinery to keep it in motion.

The developments, have gone forward, in the past two decades, with a rapidity which encourages the belief that still more valuable accessions will be made to our practical knowledge, within the next quarter of a century, and those members of the profession are to be congratulated who may have the satisfaction of observing the fully-completed work of this period. The triumphs of the surgery of the brain, the thorax, the abdomen, and the vascular system, will most probably be overshadowed by the magnificent advances in other branches of medicine and surgery.

The interminable list of remedies within easy grasp of the physician by the tact of manufacturers, continues to grow from year to year, and the diagnosis of diseases, through the implication of the nerve centers promises good fruits for the practice of medicine. But the present interest in bacteriology manifested by investigations of the laboratory and by clinical study offers the best prospect of working out good results of a practical nature at no distant day. The relation of cause and effect has, thus far, not reached a point which enables the pathologist to trace certain disorders to a bacterial origin, and the most that can be claimed is the connection of specific forms of disease with definite organisms or with microbes of a distinctive character. But there is hope for the future of bacteriology.

It is a gratifying reflection for the medical philosopher and scientist to point out the separate germs of the various disintegrating processes involved in the aggravated condition of wounds, and to define the special microbes of distinct diseases; but the practitioner is not always prepared to accompany the bacteriologist in such investigations, nor does it devolve upon him to accept the conclusions from his investigation for the application of remedies in surgical cases. After a somewhat careful research of what has been accomplished by the use of the microscope in detecting the different forms of micrococci and noting the discrepancy in the observations of different experts in this department, I am still in doubt as to the role of bacteria. But I am convinced that such micro-organisms and ptomaines have a share in the degeneration of vital structures.

My attitude in regard to the germ theory of diseases has not always been properly understood, but I wish it to be known that the results of investigations with the microscope are fully appreciated, and that the observations of those who are experts in the use of this instrument are accredited as realities. There is no doubt in my mind of the existence of the comma bacillus in cholera, the bacillus tuberculosis, the cryptococcus xantogenicus in yellow fever, the anthrax bacillus in malignant pustule, and other specific germs which have been recognized as accompanying various other forms of special diseases. But this is quite distinct from the proposition to combat these diseases by the use of germicides or to employ agents of this class as prophylactics against the development of disease.

I am on record as stating that all the practical appliances of surgery may be appropriately classed under the headings of Aseptic, Antiseptic and Septic processes. The first embody all those measures which come under the class af prophylactics, and look to the avoidance of hurtful agencies, thus being assured if the measures does no good, it will do no harm. As the term implies, asepsis consists in shunning all kinds of contamination from within and without the body. Antiseptic application in surgery differs widely from aseptic measures in their aim and results. The practice of antisepsis is confined to correcting any tendency to or the development of degeneration and disintegration of living structures, and yet the claim for antiseptics includes measures which, instead of protecting the tissues, lead to septic development.

The employment of antiseptic vapors to correct the supposed vitiated condition of the air surrounding a patient, has long been exploded, having received its death blow from Thomas Keith, at the meeting of the International Medical Congress, in London. Antiseptic washes in operations upon normal tissues have been abandoned

by many who formerly used them, while a large number of the profession, like myself, have never employed them, and are sustained by reports of the most advanced bacteriologists, that they are not simply innocent, but hurtful, by necrosing the healthy tissues. It is held that antiseptics should be reserved for those cases in which septic processes are to be combatted, and that antiseptic surgery ought to be limited to cases presenting septic conditions. Aseptic surgery has supplanted the so-called antiseptic surgery, in most surgical cases.

In accordance with the accredited doctrine of the Rev. John Wesley, that "cleanliness is next to Godliness," the medical profession has adopted the most stringent regulations against filth of every kind, and eschews dirt in all its forms, in surgical procedure, and in the regime of the sick room. Not only is the surgeon and physician, as well as the nurse to be scrupulously clean, but everything about the patient and bed must be kept clean.

The funeral procession of so-called antiseptic surgery is accompanied by a host of mourners, headed by Sir Joseph Lister, and the last rites of the solemn service at the tomb are to be conducted by a white-robed priest of the order of Esculapius, who with clean hands will lay the defunct body to rest, in everlasting oblivion. "*Requiescat in pace.*"

COMMUNICATIONS.

REFLEX IRRITATIONS.*

SAMUEL AYRES, M.D., PITTSBURG, PA.

There are many interesting problems connected with reflex irritations, the correct solution of which would make us Masters of our Art. The ability to recognize, and then to remove, the causes of remote disturbances in the system, would be so desirable to possess that, were one so endowed, his power of healing would be little less than that of the gods.

It seems curious to me, in view of the great importance of this subject, that there is no distinct treatise in the English language, and so far as I know there is none in any other language, containing a philosophical analysis and interpretation of reflex irritations, based especially upon clinical and experimental research. Where, for example, can we find a convincing explanation of the mechanism of production of the vertex pain, or the palmar heat or wrist pain, said to be caused by uterine disease? On all sides the expression *reflex irritation* is used by medical men; perhaps too often in a nebulous sense to conceal ignorance, or to change the subject—perhaps often in a correct manner, but without a real conception of the mechanism involved. Indeed the term has well nigh become an oppobrium to our art.

It would be well at the outset, it seems to me, to have a clear understanding of what is conveyed by the term "reflex irritation." I believe it is agreed to mean an irritation at some point of the body, internal or external, such as an injury, a foreign body, a pressure, or, indeed, a lesion of any character, which produces a disturbance, or pain, or disordered function at some other part of the body, usually considerably removed from the original point of irritation. The primary irritation is to be regarded as the cause and the reflex irritation or disturbance as the effect. Two elements are therefore always present. It will not be forgotten of course, that reflex acts and influences abound in countless numbers throughout the body; indeed this is an organic law of our economy. But these physiological reflexes, such as the contraction of the heart from the stimulus of blood; the peristalic movements of the intestines from the presence of their contents; or the ac-

* Read before the Allegheny County Medical Society, February 19, 1895.

tivity of glands from their accustomed excitants, are not referred to in the above definition. If the symptoms of visceral or other internal disorders were localized over, or in, the part primarily affected, there would be little difficulty in the study of reflex phenomena. We would merely have to search beneath the surface for the cause. But, unfortunately, this is not the case. Instead, there is a veritable labyrinth of nervous inter-communication and ramification, the irritation of some part of which may be transmitted to a distant region and exhibited as pain or disordered function.

But notwithstanding this complexity of nerve irritations and manifestations, may not the question be pertinently asked, whether there has not been in the last decade or so too much stress put upon reflex agencies in the production of disease? In other words, are there not many symptoms incorrectly attributed to distant lesions, or reflex sources; and, on the other hand, are there not lesions whose remote effects are not recognized or correctly interpreted? The first part of the paragraph naturally suggests local or constitutional causes of a disturbance as opposed to reflex causes. To illustrate: A person has pain, or numbness, or some abnormal sensation, in some of the fingers, or a part of the hand. Is the cause of this local, or is it a reflex from the bladder, or uterus, or elsewhere? Or, a poorly nourished girl has infra-mammary neuralgia; she also has menstrual pain and leucorrhœa; is her neuralgia caused by anæmia or by some uterine irritation? Thus we see that no matter which way we turn the subject is fraught with interesting phases. But let us be more specific. What class of irritation shall we first consider? Suppose we begin with the ocular.

It would be trite indeed to more than refer to the reflex mischief alleged to be set up by errors of refraction, muscular insufficiencies, irritations, or other defects of the eye. Headaches galore, occipital distress, frontal pressure, vertigo, nausea, epilepsy, chorea, insanity, etc. Do these symptoms, and still others claimed, actually result from this source? Will astigmation in the left eye, of one-half dioptre cylinder axis vertical and hypermetropia of two dioptres in the right eye, always produce a certain effect in a school teacher twenty-five years of age in ordinary health? Will they produce the same, or similar effects, in twenty women or twenty men, the conditions being about equal in all? Will they not often occur without noticeable effect? If so, why? The answer may be made that the human system is not a fixed quantity, and that such effects cannot be precisely estimated. True, but are there not enough cases of like character from which to deduce some law? Is there such a law governing these alleged reflex ocular disturbances? Will the ophthalmologists please enlighten us?

A few years ago, the startling announcement was made by a New York physician that chorea, epilepsy and insanity are functional nervous diseases caused by refractive errors, the relief of which, by glasses, would cure these disorders. A little later, this versatile physician shifted his position, or sufficiently stretched the margins to include muscular insufficiencies as further causes of these affections—hence tenotomies and prisms would cure what cylinders and spheres had failed in. The New York Neurological Society after a thorough investigation of the above claims, failed to substantiate them; and D. B. St. John Roosa, in a valuable paper entitled, "The Relation of Errors of Refraction and Insufficiencies of the Ocular Muscles to Functional Diseases of the Nervous System,"* completely exploded this theory. He states: "From an examination of 6,455 eye cases, defective muscular or refractive states do not necessarily produce even local disturbances, such as are comprehended under the term asthenopia, inflammation of the edges of the lids, etc., although high degrees of hypermetropia, and moderate degrees of astigmatism, and all cases of mixed astigmatism are apt to do so, sooner or later," But note, he does not say they invariably do. He farther remarks that asthenopia depends chiefly upon two sets of causes, nervous exhaustion and uncorrected errors of refraction. You observe he places a constitutional or general cause first.

In the *Lancet* of October 28th, 1893, H. W. Dodd reports 100 consecutive cases of epilepsy, their refraction and their treatment by glasses, in which he states that of the 100 cases 25 did not require glasses, so they were not prescribed. Of the remaining 75 cases, only 52 secured and wore glasses as ordered. Of these, 52,

*N. Y. Medical Record.

he says, 13 have had no fits since wearing the glasses during periods varying from one year to four months. Three cases remained in *statu quo*, and 36 have improved in a marked degree.

While some of these individual cases show surprising results and seeming cures by the removal of the apparent exciting causes of the attacks, the results are, on the whole, much obscured by the statement that in nearly all cases the usual internal treatment was continued some time after the glasses were ordered. Then again, the period of time of from four months to one year is not long enough to draw conclusions as to cure in epilepsy. It is a very common thing for cases to escape an attack for several months, or even a year, under large doses of bromide, and then relapse later.

Dodd in his summary uses this language:

"Given a certain condition of instability of the nervous system,

"(*a*) Errors of refraction may excite epilepsy.

"(*b*) The correction of the errors of refraction will, in combination with other treatment, in many cases cure or relieve the epileptic condition."

Thus, we see how conditional are his statements, and how uncertain are the figures here claimed; and how, in many of these neuroses, apparently cured by the relief of some peripheral defect, an unstable nervous system is the real lesion, without which the various reflex irritants would fall as harmlessly as drops of water upon a solid rock.

What as to the aural reflexes? We do not hear much of them. But can we not have ear strain as well as eye strain? The muscles of the middle ear, the tensor tympani and stapedius, are, perhaps, quite as delicate as the ciliary muscles. May they not be disturbed in their action, and produce ear strain? Here is a field, it seems to me, for some enterprising otologist. But we know that there are reflex irritations connected with the ear. For example, every one must have heard or experienced the cough that is often caused by pricking in the external auditory meatus, or by the presence of cerumen; and the vertigo and nausea of Meniere's disease are classical.

How shall we approach that prolific field, the nasal and naso-pharyngeal reflexes? It is an interesting one, and a sensitive area, too, as every one knows who has had a pledget of cotton covered with iodine, etc., swept over its mucous surfaces. This never fails to bring the tears, or redden the eyes, or provoke a sneeze—evidence at once of one of the most pronounced reflex upheavals of which the system is capable. What are the remote effects of inflammation of the nasal mucosa, of polypi, hypertrophies, exostoses, rhinoliths, deviated septa, etc.? Since the nasal fossæ are so richly endowed with sensory nerve ends from the first branch of the fifth pair, and from the glosso-pharyngeal and vagus; and since so exposed, they are obviously the source of much local disturbance, whether their reflex irritations are as far-reaching as is claimed is another question.

McBride in his work on "Diseases of the Throat, Nose and Ear," says: "There can be no doubt that at present there is an undue tendency on the part of specialists to seek in the nose, the starting point of various evils. Yet, it cannot be denied that even this position is preferable to stolid skepticism." This writer thinks that nasal polypi do sometimes cause asthma, as first pointed out by Voltolini; and that cases of migraine, nervous cough, supra-orbital neuralgia, swelling of the face, vertigo, and epilepsy are closely associated with conditions of the nose.

Von Stein states that functional affection of the heart, as palpitation and pain, may be caused by nasal irritation. Joel has related cases of œsophogeal spasm cured by nasal surgery. Hack describes a case of Basedow's disease relieved by cauterizing the nasal mucous membrane. Nocturnal incontinence of children has been traced to nasal stenosis by Ziem, Major and Block. Bosworth in his treatise on diseases of the nose and throat, p. 193, says he has seen a number of cases of chorea relieved completely and permanently by the cure of nasal disorders. Sollinger and Fincke report cases of epilepsy cured by treating intranasal disease, and Richardson mentions the case of a lady thirty-four years of age cured of epilepsy by the removal of a post-nasal fibroma. On the other hand, Moldenhauser states that he never met with a supra-orbital neuralgia or simple headache, from a nasal reflex, and Sajous

says exostoses in the majority of cases give rise to no inconvenience unless they extend across the fossa and compress the turbinated bone. Thus, we have the diverse views of different writers on this phase of the subject. What conclusion shall we reach? I fear the same elements of error and haste are to be found here, as in the alleged ocular reflexes.

A neurosis that has been apparently cured, or temporarily relieved by treatment of the nose is not necessarily of nasal origin. It may exist coincidently, and not be thus caused. McBride seems to get at the correct solution of many of these so-called nasal reflex neuroses, in his statement that irritation of the nose may change a nervous center from stability to instability. "Is there any valid reason why the reverse should not take place?" He says: "Is it not probable that, given an unstable nerve center, irritation of the nose may render it stable?" Thus he believes that the application of the electric cautery and other agents to the nasal mucosa often act as counter-irritants, and thus relieve in this manner. In other words, an equally good counter-irritant or derivative applied to the nucha, or temples, or elsewhere, would probably give the same results. In this connection, I may mention the case of Mr. S. as an illustration of the stress that is laid upon some of these reflex sources, as the fountain of all evil to the exclusion of the real cause. Mr. S. was a most afflicted man; mournful and melancholy, nervous, fearful and tearful; with head and body pains enough to satisfy the most enthusiastic specialist, no matter what his field. He had gone the round with the usual results. Sanitoriums, and their baths and waters, had been freely taken internally and externally. In Chicago he had fallen into the clutches of those orificial fellows who discovered the cause of all his lamentations, and promised quickly to relieve him. His rectum was most effectually bored and ballooned, and his anus trimmed "according to Hoyle." But, not being relieved, he in due time landed in the office of an Allegheny doctor, who found his ills all due to some bones in his nose. These were sawed out, and still he suffered as before. In this extremity he came to see me. It was not a very difficult feat to discover that he was suffering from constitutional syphilis, and that this was probably the cause of many of his symptoms. The response to specific treatment, which he had evidently not received before, was altogether satisfactory, and most of his symptoms disappeared; but not all, for these cases rarely get entirely well, as you are perhaps aware. It was a matter of more surprise that there were enough bones left in his nose to saw out.

Another case which was under my treatment, and would by all precedent be regarded as a cure of epilepsy by the removal of the hypertrophied tissue on the turbinated bone, may be referred to. It was that of Mr. S., twenty years of age, who had been epileptic for six months; a fit every week or two without a very clear cause, though he came of a neurotic stock. While examining him I touched with a probe the inferior turbinated bone, when he immediately had an attack. I recommended the destruction of the hypertrophy, which was done under cocaine, and he has had no spell since, now more than two years; but I was careful to keep him on large doses of bromide for several months. I saw this man the other day and he says he has sensations in his head of threatened attacks. I do not believe the hypertrophied tissue was the real cause of his fits, and am satisfied if I had touched his eye, or occasioned any sudden pain, the shock would have originated the spasm, just as the sensitive nasal tissue seemed to do.

Turning now briefly to dental reflex irritation, we find numerous transferred disturbances from this source. There can be no doubt that, in weak, nervous children during early dentition, convulsions, vomiting, eczema, diarrhœa, and other troubles, result from this source. Occasionally the irritation from a decayed tooth, or inflamed dental nerve, is transmitted to the ear, producing well marked earache. Headaches apparently due to dental origin are said to affect chiefly the temples and occiput. How often, though, have we seen whole sets of teeth, and many of them sound, too, sacrificed to a mere suspicion that they were the cause of persistent headaches; when, in truth, the teeth were not in any manner responsible, as is proved by the continuance of the headaches after their removal.

The reflex disturbances of gastric origin are apparently so numerous that time

will not permit more than brief reference to them. The stomach being the center of a nerve plexus whose branches ramify directly or indirectly to every part of the body, it is not strange that, when disordered, it should originate disturbances at almost any part of the system. Its irradiations are transmitted chiefly through the two branches of the pneumogastric and the sympathetic nerves. The altered chemistry of digestion causing imperfect assimilation, and the usual train of dyspeptic disorders, does not correctly come within the province of our subject; for the absorption of these products of defective digestion, and their circulation in the blood, directly cause local irritation at any point of the body; such, for example, as joint pains, or headaches, from uric acid. A good illustration of reflex disturbances from this organ is gastric vertigo. The mechanism of this reflex is believed to be the following: The irritation from the stomach when overloaded is transmitted through the sensory fibres of the pneumogastric to the nuclei in the pons, and from there through other of its fibers which pass to the cerebellum. Since this organ chiefly presides over equilibration, a temporary disturbance of its function, possibly circulatory, occasions the dizziness. Reversing the direction of the irritation, we can readily understand the vomiting which often accompanies vertigo from central derangement of the cerebellum. We shall not stop to explain the frequent production of gastric vertigo through the close connection between the nulcei of the vagus and auditory nerves in the pons, and the resultant disturbance of the labyrinth.

The back pains over the eighth or ninth dorsal vertebra from gastric ulcer are also well-known reflexes; the explanation being that the irriation from the ulcer passes through the sensory sympathetic nerves, and from their ganglia to the corresponding segment of the cord, from which the irritation is reflected through the posterior root nerve to this particular region.

Were there any doubt as to reflex disturbances arising from disordered conditions of the uterus, ovaries, their appendages, the nausea and vomiting of pregnancy would be a sufficient argument to silence all skeptics. But there are no doubts on this subject; the only question is as to what remote disorders are directly the result of irritation in these organs. There is perhaps no problem in the realm of symptomatology more difficult to answer. Those who labor in the field of gynecology will, I think, confirm this statement. That ocular, cephalic, respiratory, cardiac, gastric, spinal, splanchnic, and other transferred irritations, are caused by these pelvic lesions, is a sort of tradition which we all implicitly accepted in our early years, and it still contains much truth. But how often are we doomed to disappointment if we rely solely on the restoration of these generative organs for the cure of the distant irritation.

It is not many years since these viscera were regarded as the *fons et origo* of all evils in woman; but I think the Schneiderian membrane and the ciliary and recti muscles are sharing this responsibility in the last five or ten years. The error of such conclusions is exemplified in the following case: This was a girl of about twenty-two, a former patient of mine, affected with recurrent mania, from whom a well-known gynecologist removed the ovaries with the expectation of curing the mental malady; and both himself and the family actually thought he had restored her, for the operation had quite a derivative effect, and she appeared all at once to get well. But, of course, she relapsed, as these cases always do, and she is still as miserable as she was before the oöphorectomy. The mental disease had not been understood. Owing to the far-reaching influences of sexual derangements in woman, and since pelvic surgery is so comparatively safe in competent hands, it has, I believe, largely become the practice to cure the diseases of these parts, if possible, by way of exclusion, and await results. But it is also true that constitutional conditions, as depraved states of the blood, exhaustion, etc., quickly disorder these organs, and that a course of rest and upbuilding (except there be palpable local disease) may not be time lost.

It was my desire to include a brief consideration of those very interesting reflex phenomena connected with vesical, prostatic, rectal, and urethral diseases; but as I fear to tax your patience, I must forego this part, I will, however, state in connection with this subject, that the numerous reflex neuroses supposed to emanate from phimosis and adherent pre-

puce, can now, at least, be counted in one day; and that we hear much less of the necessity of circumcision, except for hygienic and moral purposes.

I must here distinctly disavow the least inclination to discourage or to interpose any obstacle to the legitimate search for the actual causes of reflex symptoms; but I must insist that one's zeal should not run away with his judgment; and I am opposed to that medical enterprise which would make all the crooked ways straight, and the rough places smooth, in the vague searches for the causes of lesions. But I am free to confess there are extenuating circumstances even in the practice. Were medicine an exact science, and the interpretation of these same reflexes systemized, our investigations would be more exact, and we should know better where to look for the causes of the disease. But since it is not, and since our efforts in one direction after another fail to relieve our patient's distress, we, in our despair, seize upon this, or upon that, as the possible origin; and, like the drowning man, grasp at a mere straw; and so is our most ancient and honorable profession brought low. Unfortunately, my brethren, the fault is too often with ourselves. We do not, or cannot, look deeply enough, and search out the hidden mysteries of disease.

Another interesting question might be touched upon here, if certain disordered conditions present are not believed to be the essential cause of the discomfort or impaired health, to what extent may they act as contributory causes? For example, a case of anæmia has hypermetropia; or a case of uterine disease has also a rectal fissure; will the eye strain in the former tend to use up some extra nerve force, or cerebral energy, so that the nutrition and blood-making organs are retarded in the performance of their functions? It may be so; the question is difficult to answer. Perhaps this is the reason for the general patchwork and repair advised by some specialists. It would seem the wiser course, though, to first correct that lesion which seemed to be the chief cause; and if, after sufficient time and general treatment, the trouble had not disappeared, then remedy other defects.

We must here enter our protest against the premature reports of alleged cures after the removal of the supposed reflex cause. I am sure this is a very prevalent error. Owing to the enthusiasm of many operators, the conclusion is at once reached, after an operation, that the cure is permanent; and forthwith it goes on record. In many of those cases immediately relieved, the psychical effect of the operation, *per se*, or its derivative effect on the circulation, or innervation, is, I believe, no small factor; and from six months to two years should intervene before pronouncing a case positively cured. The temptation to rush into print is dazzling to some, and one reason for the unreliability of statistics.

In our endeavor to reach correct conclusions as to the part certain defects or irritations in organs or tissues may play in this drama of disease, we should bear these leading facts in mind: That constitutional conditions, as gout, syphilis, rheumatism, or other toxic blood states, deep-seated local disease, cerebral and nerve exhaustion, and especially inherited or acquired instability of the nervous system, are of the first importance; and the influence of environment; of meteorological conditions; of various psychical factors, as suggestion, expectation, etc., is not to be underestimated.

Perhaps it may be said that there are three classes of cases with reference to reflex irritations: 1. Those persons of normally robust organizations, on whom ordinary irritations play in vain; their equilibrium cannot be disturbed by anything short of a decided cause. 2. Those persons of unstable nervous systems, who are susceptible to reflex disturbances, but from careful avoidance, and other fortunate circumstances, largely escape their effect. 3. Those neuropathic, sensitive constitutions, so delicately balanced that a single depressing or irritating agent will throw them into an abnormal or pathological state—our neurasthenics and hysterics, for example.

There are many phases of the subject that could have been considered with profit had time permitted. For instance, I have not referred to the mechanism of the reflex arc which enables us to explain many of the more manifest transferred phenomena of irritation. It seems probable that in the production of those complex and unaccountable reflexes, the sympathetic nerves must form the chief media of communication.

NEPHRECTOMY IN A CHILD OF TWO YEARS FOR A SIX-POUND SARCOMA; RECOVERY.*

J. J. BUCHANAN, M.D., PITTSBURG, PA.

The specimen which I here present is a morbid growth of a kidney which I removed by the transperitoneal method from a female child a little less than two years of age. The operation was performed three weeks ago last Thursday, (Jan. 25th), and the child was removed to its home, well, in two weeks from that time.

The history of the case is brief and typical. When she was about nine months old, an enlargement could be felt by the parents in the left side of her abdomen, which gradually increased till it filled the entire left half of the cavity, from the border of the ribs to the groin and encroached far beyond the median line. No urinary symptoms were at any time exhibited. Of late the child had declined in health and weight, and when operated on was in a very debilitated state. The growth was smooth, elastic and slightly movable. It gave all the physical signs of a solid mass. A diagnosis of sarcoma of the kidney was made before operation and the macroscopic appearance of the specimen, taken with the location and history, and age of the patient, leaves little doubt that the tumor is of a sarcomatous nature; but it has not yet been submitted to microscopic examination.

The incision for its removal was placed in the left semi-lunar line, and was rapidly enlarged to an extent sufficient for the extraction of the mass. When the tumor was exposed, it was found to have developed between the folds of the meso-colon; and the descending colon was stretched over its entire anterior surface, from above downward. This condition of affairs has led to the abandonment of the operation by competent surgeons; but since I met with an exactly similar disposition of the bowel over an intralgamentous cyst some years ago, which was successfully dealt with in the manner I am about to describe, I was encouraged to proceed with the enucleation. A longitudinal incision was made through the external fold of the meso-colon parallel with the bowel, and the bowel and the meso-colic covering of the tumor were peeled away till the base of the growth was reached. A satisfactory pedicle was secured, consisting of the ureter and the vessels supplying the kidney. This pedicle was tied with silk and dropped. Only one vessel in the mesentory required ligation, and the entire loss of blood did not exceed an ounce.

An examination of the single fold of meso colon, which was now attached to the descending colon, showed that it probably carried vessels sufficient to nourish the bowel. A temporary packing of gauze was placed in the cavity till the external wound was almost closed. This was finally removed and found dry and the incision closed without flushing and without drainage.

The tumor weighs six pounds, and, it will be observed, springs from the upper portion of the kidneys, which can be easily identified in its lower two-thirds.

In renal tumors of such large size, the lumbar incision (extra-peritoneal) is manifestly out of the question, and the only point as to the incision is its direction. Gerster prefers the transverse, as does Abbe; but, in this case, the longitudinal, in the linea semilunaris proved perfectly satisfactory and seemed to give the freest access both to the surface of the mass and to its pedicle. The Trendelenburg position was employed toward the close of the operation, and no doubt limited the venous oozing and kept blood in the infant's brain.

Although chloroform was used for anesthesia, and the amount and duration of exposure limited as much as possible, an acute bronchitis supervened, from which the child recovered in a few days. No abdominal symptoms appeared; and, as before stated, the child was taken home in two weeks, and has since been perfectly well.

Sarcoma of the kidney is a particularly unpromising disease for surgical treat-

* Read before the Allegheny County Medical Society, February 19, 1895.

ment; and is, of course, absolutely hopeless when treated in any other way. The pedunculated nature of the kidney itself; the fact that a sarcoma, developing in its substance, expands its capsule and forms a definite mass, which can usually be completely removed; together with the fact that autopsies have sometimes shown these growths to have been solitary and without metastases, would render it probable that they are among the most favorable of all malignant tumors for extirpation. On the contrary, however, they are about as unpromising as any growths with which we have to deal. Abbe, of New York, reporting two cases in very young children, still living at periods of one and one and a half years after operation, quotes the statistics of Barth, of Marburg, and Sigrist, as follows: "Barth reports, up to June 8, 1892, collected statistics of 100 nephrectomies for malignant disease, the largest yet gathered, of which 42 died from operation, 20 died from metastases and 38 were cured. The use of the word 'cured' here cannot be accepted in its strictest sense. Sigrist collected 64, with 32 deaths from operation. Nine went one and a half years without recurrence. Five went beyond two years, and one continued well at four years."

These statistics are certainly appalling, and would seem to almost justify the opinion expressed by Mr. Bland Sutton, at a meeting of the Clinical Society, of London, just one year ago. He spoke as follows: "In the cases under discussion, the chances of prolonging life are so very remote, and the immediate risk to life is so excessively great, even in the hands of the most skillful operators, that any surgeon who undertakes the removal of a renal sarcoma in a infant incurs a very grave responsibility, and he would act more judiciously by placing the child under the beneficent charge of a physician."

Mr. Godlee's suggestion, however, should have some weight even with the pessimists, namely, that before the operation be set down as unjustifiable, a series of operations be done on tumors of small size when, of course, the probability of metastasis is the least.

A CASE OF DIPHTHERIA TREATED BY ANTITOXIN.

T. J. ELTERICH, M.D., PITTSBURG, PA.

On Wednesday, February 13th, at 1 P. M., I was called to see Minnie O., aged 6 years; a healthy, well-nourished girl. She had been ill one day. On examination, I found both right and left tonsils covered by pseudo-membranes, tongue heavily coated and a thin serous discharge mixed with blood from the nose. A most pronounced fetid odor was present. The chest, back and limbs were covered by an erythema. Axillary temperature 101½° F., pulse 120, marked dysphagia, headache and general malaise. She had vomited once. Examination revealed nothing abnormal about the heart and lungs.

I rubbed a sterilized cotton swab over both tonsils and sent it to the laboratory for bacteriological investigation. Ordered bichloride of mercury, 1-40 gr. every two hours and stimulants. No local application of any kind was made, neither then, nor at any time during the progress of the disease.

I saw the patient again at 8 P. M. Her condition was about the same as at 1 o'clock; temperature 102½° F., pulse 120, considerable glandular enlargement. Examination of urine sp. g. 1030; acid reaction, no albumen or sugar.

Feb. 14. Condition of the throat about the same as on the previous day, except that the pharynx has become involved. She had passed a restless night with high fever. Temperature at 10 A. M. 99½° F., pulse 120. Report from the bacteriological laboratory, true diphtheria.

At 8:30 P. M., about thirty hours after I had first seen the patient, and about sixty hours after the first appearance of the disease, I injected 10 c. cm. of Behring Serum, White Label No. 2, 1000 antitoxin units. I was assisted by Dr. Chas.

S. Shaw and Dr. J. B. Crombie. Condition immediately previous to injection: Both tonsils and pharynx covered by pseudo-membranes, discharge from the nose, cadaveric odor, temperature 102½°, pulse 120. After having first cleansed the skin with a solution of bichloride of mercury the injection was made by pinching up a large fold of skin, immediately below the right scapula, for this purpose. Dr. Roux's antitoxin syringe was used. No re-action, either local or general, followed the injection. The bichloride treatment was now discontinued, and nothing but stimulants ordered. On the following day I again saw the patient at 9:30 A. M., thirteen hours after injection of antitoxic serum. She had passed a restless night, and complained of pain at the point of injection. However, an examination revealed no inflammation whatever at the point of injection. She was now bright and cheerful; no odor present, temperature 99½° F., pulse 108, somewhat irregular; on inspection the membranes appeared thinner, white in color and at one point on the right tonsil a red spot about the size of a three-cent piece could be seen through the membrane. Slight glandular enlargement still present. Patient taking more nourishment.

At 8.30 P.M., twenty-four hours after injection, a remarkable change had taken place. The greater part of the membrane *had entirely* disappeared, leaving an apparently perfect healthy mucous membrane. No ulceration whatever, temperature 101°, pulse 96 and regular. Patient takes plenty of nourishment.

February 16th, 9.30 P.M., thirty-seven hours after administration of antitoxin, only a small portion of membrane still visible, appearing as thin flakes about the size of a pea on each tonsil. The mucous membrane apparently perfectly healthy, of a pale red color, no ulceration. Patient had slept all night; temperature 98½° F., pulse 90, full and strong. The patient now recovered rapidly, the remnants of membrane disappeared within twenty-four hours, and, to all appearances, the patient is perfectly well; is not anæmic, eats well and sleeps well. The urine was again examined, but no trace of albumen could be found.

Since the administration of the antitoxic serum she has received no medicine whatever, with the exception of a dose of castor oil on the second day. The only unfavorable symptom which was noticed was the irregular action of the heart soon after injection, but which disappeared in the course of twenty-four hours.

I have reported this case, not with the expectation of proving the efficiency of serum therapy. I simply wish to call attention to a few facts; namely, the rapidity with which the remedy has acted, the manner in which the false membrane disappeared, and the absence of any unfavorable symptoms with the one exception, irregularity of the heart's action.

I frankly admit that this case was not of the malignant type, and although a grave form of the disease, a reasonably good prognosis could be given; but at the same time, I must insist that I have never seen a case of such a severe type yield so quickly under the old methods of treatment. Within forty-eight hours after the injection, the false membrane had entirely disappeared without leaving any ulceration whatever. The membrane did not detach, it melted away. The success which I have achieved in this case will warrant me to continue to use this remedy, and especially in the laryngeal form of diphtheria, the treatment of which, we must admit, has been nothing but a dismal failure heretofore.

Cannabis Indica.

This drug, the most active of non-opiate anodynes or soporfics, which was very popular years ago, although little the fashion at present, is deserving of a large share of professional favor, *Med. Rev.* The principal cause which led to its disuse was fear of its toxic power, though there has never been a case of poisoning recorded from its use. Its effect on the system is most marvellous. It causes sleep, overcomes spasms, relieves pain and all nervous irritability, and that too within a few moments after administration. Its soothing and curative effects upon the nervous sympathetic system are great, and there is no one agent that will restore the epuilibrium of nerve motion more quickly. The placidity of repose that is produced by this narcotic is rapid and to the point. Further, it does not check secretion or tend to constipation. It does relieve fatigue and arouse vital action, and can and should be given freely until the effect desired is apparent.

TRANSLATIONS.

ARE MILK-SUGAR AND GALACTOSE DIRECT PRODUCERS OF GLYCOGEN?*

Kausch and Sochin kept rabbits from food for five days so as to reduce the glycogen in the system to a minimum. In the course of twelve hours fifty grams of milk-sugar were given, in concentrated solution. Twelve hours after the last portion of sugar, the animals were killed and the glycogen was estimated. Little was found either in the liver or muscles. This fact was explained on the ground that in rabbits, the ingestion of milk-sugar regularly produces a great deal of gas in the intestine so that absorption is interfered with. Dogs were kept without food for ten or eleven days and then given 100 or 200 grams of milk-sugar. From 8.12 per cent. to 9.82 per cent. of glycogen was found in the liver, 0.33 per cent. to 0.56 in the muscles. After the administration of 100 grams of galactose, 6.73 per cent. was found in the liver and 0.54 per cent. in the muscles. The conclusion is reached that both milk-sugar and galactose, like laevulose, produce glycogen, the quantities of the last found in the dogs not being explicable by decomposition of proteids. The deduction in the management of diabetes is obvious.

TWO KINDS OF BACTERIA THAT PRODUCE BUTYRIC ACID.

Dr. W. Kedrowski has isolated two anaerobic bacteria from mixtures containing butyric acid. One is a slender, motile bacillus, slightly arched, thriving on solid nutrient media, liquifying gelatine, producing a disagreeable gas, coagulating milk in the production of butyric acid. The second is a thick bacillus, growing rapidly on gelatine and secreting a gas of vile odor. It, too, is motile and decomposes milk with the formation of butyric acid.

THE DIGESTION OF SUGARS IN HEALTH.

Dr. W. G. Aitchinson Robertson's article in the Edinburgh *Medical Journal* is quoted. He concludes that cane-sugar is unchanged by the saliva and only slightly inverted by the gastric juice. The more so, the greater hydrochloric acidity of the stomach. In the small intestine, cane sugar is completely inverted by a ferment for which the name invertine is proposed.

[The experience of the translator does not agree with this report. A solution of cane-sugar was warmed in a test-tube with saliva. After about twenty minutes no reduction of copper was found but after an hour, there was an abundant precipitate.]

ACUTE NEPHRITIS FROM INUNCTION WITH NAPHTHOL.

Dr. Baatz reports two cases occurring in boys aged respectively six and eight, who developed nephritis after being treated two weeks for scabies. A 2 per cent. B naphthol ointment was used, the older boy having eight inunctions, the younger six. Four and three grams of the drug, respectively, may have been absorbed. The younger child died.

*Translated for THE MEDICAL AND SURGICAL REPORTER by A. L. Benedict, M.D., from "Schmidt's Jahrbucher."

THE ROLE OF ACID IN PROTOZOAN DIGESTION.

The researches of M. Greenwood and E. R. Saunders are quoted from the *Journal of Physiology*. By the aid of different aniline dyes, they investigated the digestion of several protozoa. Every solid substance introduced, called forth the secretion of acid, but the substances were unchanged by it for a long time. During digestion, the quantity of acid diminished and finally, an alkaline reaction set in. The nature of the free acid was not determined except that bi-carbonic acid was excluded. [And, undoubtedly, from the nature of the reagents used, all organic acids]—Ed. A digestive ferment was not discovered.

THE VALUE OF SUGAR ON MUSCULAR WORK.

The investigations of Vaughan Harley are quoted from the same journal. He first found that the muscular power had daily periods of rise and decline, being greater in the afternoon. A diet of clear sugar supported the strength for muscular exertion almost as well as the customary food except that fatigue was noted earlier. A luncheon of sugar postponed the usual hour of fatigue.

[Pohlman, of Buffalo, has long taught that muscular labor requires carbo-hydrate rather than proteid diet. The translator has found the ordinary cakes of sweet chocolate to be a very convenient and satisfactory luncheon at night.]

THE PHYSIOLOGY AND PATHOLOGY OF READING.

Dr. Goldscheider and his student R. F. Müller, by means of a screen and moveable characters, have exposed letters, figures, etc., to view for a space of about $\frac{1}{100}$ of a second. They found that most persons read by the "word-method" rather than by spelling. Four letters were easily read in the $\frac{1}{100}$ of a second. Complicated and simple letters were read with equal ease and there was a tendency to compare figures and other characters to letters rather than to describe them or to read them as numerals. Words of five letters usually required two exposures of $\frac{1}{100}$ second each before they were comprehended. Such expressions as "Admission positively forbidden" were read in about three hundredths of a second. However, it was shown that only part of the phrase was really seen for similar expressions differing slightly from those in common use were repeatedly misread.

A NEW METHOD FOR STERILIZING LIGATURES.

Mr. Répin, after numerous experiments on the sterilization and preservation of ligatures, finds that the vapor of alcohol exercises a bactericidal action which is capable of destroying all species of micro-organisms. Spores of the greatest resistance, like those of the bacillus subtilis, anthrax, tetanus, etc., are killed by remaining from thirty-five to forty-five minutes in the vapor of absolute alcohol raised to 120° C. Catgut is sterilized by this process without losing any of its properties. Its sterility is then tested by placing it in a tube of bouillon which is incubated for several days. If sterilization is not complete the bouillon becomes cloudy, but if the bouillon remains clear the catgut is rigorously aseptic.

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SATURDAY, APRIL 20, 1895.

EDITORIAL.

THE PULSE AS AN INDICATOR IN DIAGNOSIS.

Less attention is now paid by medical men to the human pulse as an indicator of diseased states than ever before. This is to be regreted for, although we do not believe that such fine distinctions can be made as were claimed by some of the old authorities, such as being able to tell when a person needed to micturate by the state of the pulse, yet we do think that with a nice sense of touch and with the rational acceptance of other signs and symptoms some of our older brothers averted many mistakes in treatment resultant from faulty diagnosis. Mistakes as often of omission as of commission may be made in this way, for there is no doubt that in almost any diseased state, if there is any possibility of accomplishing anything with remedial agents, it is in its inception.

One of the commonest of errors is the opinion that most diseases must of necessity, run a certain course. To be sure, this is more or less true of some, but cases, even where the tendency is very strong to run a certain prescribed course (under natural conditions,) may often be much modified by treatment. There is no doubt but that there are numerous examples where, when the *materies morbi* is not in large amount, the use of timely remedies may not only modify but abort the disease. This is evidenced very markedly in the statistics so far given of the usefulness of antitoxine as a curative agent in diphtheria. Here the element of *timeliness* is most important.

The well worn proverb *obsta principiis* applies especially to the timeliness of remedies. It avails not to say, "That the cases were of a mild form, and would have gotten well under any, or no treatment." Or to go further and say, as we have heard more than once, "That all cases of cholera infantum that die are true cholera and those cases which get well are not." "That all cases of membranous croup (so called) that get well are doubtful, and cases that die are sure."

In the effort to bring the practice of medicine to an exact scientific basis, so far as physical signs, symptoms and treatment are concerned, the finer diagnostic features are often lost sight of, and the possibilities of discerning them discredited. In fact, the acceptance of fine diagnostic indications, unless accompanied by ample evidence of mechanical proof, is refused, and the assertion of such distinctions relegated to the realm of charlatanism, supermundane quackery, or old fogyism. Followed out to the ultimatum, this means that one cannot diagnose any of these diseases until their characteristic signs and symptoms are written all over the patient, and if one undertakes to diagnose and cure the patient before the disease is well marked, he is met with the cheerful assurance that the patient did not have the disease.

There is such a thing as a diphtheric pulse, in certain stages, as distinctive from croup pulse as night is from day, which, by itself, would contravene any attempt to confuse or ally the diseases. There is such a thing as scarlet fever pulse, a pleuritic pulse, a pneumonia and a typhoid fever pulse—and a lot of other kinds of pulses.

The fact must never be lost sight of, however, that the pulse is only *one* thing *by itself*, and must be taken in connection with a multitude of other conditions, and that fine diagnostic points, not depending on the microscope (which is equally liable to deceive), appeals more to conscience than does any amount of mechanical genius, and that the capability to apprehend such points comes with time, experience and intellect.

On the Toxic Properties of Cocaine.

In a report recently presented to the Paris Academy of Medicine, by Maurel, of Toulouse, it is shown that under the influence of this alkaloid the leucocytes undergo changes: they become spherical and rigid, increase in size, and no longer adhere to the vessel walls. On the other hand, the capillaries contract, and thrombosis and embolisms, particularly pulmonary embolisms, may be produced. These changes may be seen after even small doses of concentrated solutions. His experiments show that intra-arterial injections, made in the direction of an unimportant viscus, are much less dangerous than intravenous injections.

Conception in the Puerperium.

Gruber reports a case which he had under his care last year, of a woman, aged 38 years, who had borne children. She was under Gruber's care for abortion at the fourth month. Four months later she consulted him again in regard to her menses, which had not appeared since her miscarriage. Her abdomen had increased in size, and on the night before her visit she had felt the movements of the child. On examination, a four-months pregnancy was diagnosed. Nine months after the abortion she gave birth to a fully-developed female child. Gruber refers to this as a case of conception during the puerperium.

Chlorine Water in Diphtheria.

Dr. Schubert reports on the value of chlorine water in diphtheria. After an experience of many years he is most enthusiastic on the subject, claiming that no known treatment equals that of internal administration of chlorine water.

He gives a teaspoonful of a mixture consisting of two parts of chlorine water, and one part of distilled water, repeating every two or three hours according to the gravity of the attack., On account of the pungent odor, the nose may be held for smaller children. Gargling or painting the throat is superfluous, but no water should be given after the draught. As a prophylactic the foregoing mixture may be given two or three times daily.—*Dental Med. Wochen.*

Chloral Hydrate in Hæmoptysis.

Dr. J. Palvy has tried chloral hydrate in 15 cases of hæmoptysis. Doses of 15 to 25 grains (1 to 1.6 grams) were injected per rectum. They are reported to have produced an effect within one half to three quarters of an hour. The chloral hydrate, besides, seemed to be also a valuable prophylactic.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES.

Dr. Edward Martin reports a case of

Epithelioma of the Penis.

The author operated on a man sixty-two years old who had been troubled for eight years with a growth on the penis. During this period applications of nitrate of silver were made at irregular intervals, causing a temporary disappearance of the prominence followed by an exacerbation. No history of injury accounted for the sore, and the only family history bearing on the subject was the death of an aunt from cancer of the stomach.

The dorsal lymphatics and the inguinal glands seemed unaffected, and amputation was performed in the usual way with such success that, nine months afterward, the patient is still free from symptoms of recurrence.

The author is not indisposed to regard cancer as communicable and to compare it to tuberculosis; he mentions writers who have shown that it may be due to drinking water, that a nodule may grow after transplantation. Few cases have yet been reported where the source of contagion was evident, but one seems to have shown where a man developed epithelioma of the penis shortly after the death of his wife from cancer of the uterus. Syphilis seems to have no other predisposing power than by furnishing a spot of faulty organization or minor resistance in the scar from a chancre.

So long as an epithelioma has not advanced beyond the warty stage the prognosis is fairly good if operation be performed, but when the tissues begin to break down the chances of recurrence are greatly increased. Sometimes it appears as though inflamed lymphatic glands improve after their source of irritation is gone. Even when the inguinal glands appear macroscopically healthy, the microscope usually shows them to be cancerous.

The main object of the paper is to call attention to the facts that:—it is not possible to deny the possibility of contagion in epithelioma of the penis. When amputation is required the inguinal glands should be dissected out, even if not appreciably enlarged.

Dr. W. R. Pryor writes of

Latent Gonorrhœa in Women.

He believes that in a majority of prostitutes and in almost all women who have had gonorrhœa there may spring up, from irritation of any kind, a discharge containing gonococci and differing only in degree from that due to recent infection.

Microscopic examination of the discharge collected from the cervix, urethra, and the vagina, of a large number of patients, many of whom complained of no local discomfort at the time, led to the opinion that a purulent discharge from the genitals rarely existed without gonococci being present in it or in the tissues producing it. The gonococcus is frequently present when there is no perceptible discharge of any kind, and while the vaginal discharge is rarely free from other pus producing organisms and may even appear to contain no gonococci, the scrapings by a Volkmann's spoon will usually show the tissues of the cervix to contain gonococci generally without other micrococci. The author draws the evident conclusion that one is not able by simple inspection to declare a patient free from gonorrhœa.

The experience of the author is that after a woman is infected she rarely is completely cured of this disease. This is due to two causes; she will not persevere in treatment after the annoying symptoms disappear, and when the cervical racemose glands are invaded it is almost impossible to eradicate the disease from them. The stronger preparations of iodine seems to be more effective for this purpose than other remedies.

Dr. G. Frank Lydston writes of

Leucoplasia and its Relation to Syphilis.

In this article the early mucous sores are not meant, but growths which appear at a later period, often when all other manifestations of syphilis have disappeared, and the author questions whether they may properly be regarded as syphilitic or whether they are not simply manifestations of a weakened system which might be due to other causes than syphilis, and which he has not found amenable to specific treatment.

The growths spoken of tend to form distinct masses or overgrowths of the mucous and sub-mucous tissues, and have received various names, among which "post-syphilitic leucoplasia," or "post-syphilitic leucoplakia" seem the most appropriate.

Habitual users of tobacco may show these growths without being syphilitic and there seems to be the same family predisposition that is often seen with regard to cancer, etc.

The condition leading to these placques may instead produce fissures of varying size with hyperplastic margins or the edges may lose the papillary appearance of a healthy tongue and show instead the smooth surface of mucous membranes.

A more serious variety tends to form nodules throughout the tongue and the step is a short one between these and cancer and they are best treated when this fact is remembered.

The author concludes that we must remember:

1. The possible existence of a certain degree of the original trouble—syphilis.

2. The question whether syphilis has not been eradicated, in consequence of which syphilitic treatment is to be avoided.

3. The relation of previous antisyphilitic treatment (mercury) to the lesions present.
4. The existence of trophoneurosis either as a result of syphilis, its treatment, or more probably of idiosyncrasy.
5. The relation of local irritants.
6. Most important of all—the lesion is to be regarded as possibly threatening to become a malignant neoplasm.

General tonic treatment is advocated and the possibility that small doses of antisyphilitics may also be required, mentioned. If operative treatment is attempted thorough removal must be carried out.

Dr. I. N. Bloom reported an

Obscure Case of Cerebral Syphilis.

The patient was a man thirty-five years of age who had suffered from iritis, enlarged cervical glands, mucous patches, etc., but who could give no history of primary sore, and whose wife remains free from any specific symptoms.

While on a business trip he was without warning taken with a sort of semi-stupor and a disinclination to leave his bed. He was seen by a physician who saw nothing of importance in the case, and the man in a few days moved to another town and then to a third and so on for four weeks, until finally word was sent to his relatives and he was brought home. When seen by the author he was in a lethargy, could be made to sit up, feebly answer questions, etc. His pupils responded to light. His face up to the forehead presented a yellowness or cachexia like that seen in cancer.

Active syphilitic treatment caused rapid disappearance of these symptoms. The patient is now receiving daily one drachm of mercury by inunction and three doses of ninety grains at each of potassium iodide.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

The Ice Bag as a Cardiac Stimulant.

A writer in *La Medicine Moderne* is quoted in *La Province Medicale* as saying that the application of an ice bag over the heart, according to Dr. Jullien, is a powerful therapeutic measure. It seems that in 1887 M. Jullien read in the *Gazette delle Cliniche* an essay on this subject by Dr. Silva, and was struck with the author's conclusions. Experimentation upon animals has shown the possibility of raising the blood pressure rapidly from a hundred and twenty millimetres to a hundred and seventy and even a hundred and ninety, and of diminishing the frequency of the pulsations considerably; and these results had been confirmed clinically. M. Jullien was not slow to verify these observations for himself. One day he was called to take charge of a patient with typhoid fever. He advised treatment by means of cold baths, and transferred the patient, a large and strong youg girl, to the care of a colleague. Soon afterward, however, his colleague's illness rendered it necessary for him to take charge of the case again. It was a grave one, and the febrile phenomena were intense. The elevation of temperature proved rebellious to the use of cold water. Soon there was a typical picture of the ataxoadynamic form of the disease. The patient had lost consciousness entirely and lay on the bed entirely uncovered, in a tetanic attitude, varied only by the certain spasms of the head. The temperature remained all the time above 104°; the pulse had reached successfully 120, 140 and 160. Under these circumstances M. Jullien fancied that the application of ice over the heart might constitute a last resort, and he made bold to carry it out. He admits that it was not without timidity that he placed the rubber bag on the region which scarcely showed the tumultuous and enfeebled beats of the exhausted heart. He watched the pulse closely, ready to stop the attempt at the first signal of danger. But in less than fifteen minutes he saw the number of the pulsations diminish and their amplitude increase; in a short time the almost imperceptible undulations of the artery gave place to more decided elevations. Whenever he removed the refrigerant the alarming symptoms returned immediately, so that after many trials he concluded to leave the ice bag in place for several days. After that the temperature yielded, the cerebral phenomena disappeared, and the patient was out of danger. He is convinced that she owed her safety to the decisive measure which he had adopted. In another case also, he accomplished a result equally remarkable by this means. In conclusion, he remarks that the beneficial effects show themselves in from fifteen to twenty minutes from the beginning of the application, and reach their maximum at the end of an hour. It is true he says, that they are evanescent, disappearing rapidly when the application is suspended, but there is no danger in prolonging it as long as the general condition remains precarious. In some cases, under its action, the height of the pulsation has been observed to be tripled, which means a pulse ampler, fuller, and more tense, with the subsidence of dicrotism, intermittence, and irregularity, and with a longer duration of the diastode. An interesting fact noted is that the effects of alchohol and those of atrophine on the circulation are in a measuee neutralized by the ice bag. This, says the

author, is not astonishing, since alcohol has the property of lowering the blood pressure by paralyizing the pneumo-gastric nerve. This antagonism, he suggests, may possibly be serviceable in some cases of poisoning.

The Mental Symptoms of Cerebral Syphilis. A Clinical Study.

Dr. Frank P. Norbury, Jacksonville, Ill., draws the following conclusions:

1. Somnambulism and allied states; lapses of intelligent conception with associated loss of memory are mental symptoms of cerebral syphilis.

2. Sudden comnolence with ocular spasm or paralysis points to syphilis, when preceded with headache and monoplegia is almost pathognomonic. Headache, quasi-periodical, as defined by Gray with marked insomnia, suddenly ceasing and followed by physical disturbance is due to syphilis.

3. Melancholia or mania when following periodical headaches, insomnia, and somnolence (*a*) with ocular spasm or other form of monoplegia of heterogeneous paralysis is due to syphilis. (*b*) Pseudo-paranoia. By this he means cases presenting all symptoms of paranoia, systematized delusions depending on hallucinations of sight, hearing, taste or smell, with slight impairment of general mental functions is due to syphilis, as we know that syphilis causes isolated local losses of power, and it is noteworthy when the special senses involved that mental derangement usually results. (*c*) Pseudo paresis, characterized by fibrillary tremor of tongue, indistinct speech (partial or complete aphasia), uncertain and trembling gait, with delusion of grandeur, and occasional outbursts of maniacal excitement, pupillary involvement, all characteristic symptoms of paresis, but which yielded readily to antisyphilitic treatment, we can say it was due to syphilis.

4. Class four have had epileptiform and apoplectiform attacks. We find cases in which treatment was undertaken too late. The symptoms are those of terminal dementia, only occurring in patients of previous sound mental condition and with no special hereditary history.

Pathology of Basedow's Disease.

H. Reinhold (*Munich Med. Wochenschrift*) believes the seat of the disorder to be in the thyroid gland, and reports the following case in support of his view:

The patient, previously healthy, contracted the grippe, which was complicated with an acute inflammation of the right thyroid gland. Suppuration did not occur, and the swelling and fever soon disappeared. During the fever the pulse was rapid; became normal, however, when the temperature returned to normal. Patient recovered and returned to work. Three months later there was gradual but pronounced simultaneous development of the classical symptoms of exophthalmic goitre. The author maintains, therefore, that it is a typical case of Basedow's disease, resulting from an acute infectious inflammation of the thyroid gland. Reinhold's view is certainly supported by clinical experience, as I distinctly recollect a number of cases which were at first merely simple goitre, but gradually developed the other classical symptoms of Basedow's or Grave's disease. Never did I see among the large number of cases (about thirty) of exophthalmic goitre which have come under my observation, the thyroid gland free from disease and enlargement. While one of the other symptoms which make up the classical picture, the tachycardia, the exopthalmos, the fine tremor or Graefe's symptoms may be wanting.

The Parts that Do Not Grow Old.

In his work on the senile heart Dr. Balfour tells us that there are two parts of the human organism which, if wisely used "largely escape senile failure." These two are the brain and the heart. Persons who think have often wondered why brain workers, great statesmen, and others, should continue to work with almost unimpaired mental activity and energy up to a period when most of the organs and functions of the body are in a condition of advanced senile decay. There is a physiological reason for this, and Dr. Balfour tells us what it is. The normal brain, he affirms, "remains vigorous to the last," and that "because its nutrition is especially provided for." About middle life or a little later, the general arteries of the body begin to lose their elasticity and to slowly but surely dilate. They become, therefore, much less efficient carriers of the nutrient blood to the capillary areas. But this is not the case with the internal carotids, which supply the cappillary areas of the brain. On the contrary, those large vessels "continue to retain their pristine elasticity, so that the blood-pressure remains normally higher than within the capillary area of any other organ in the body. The cerebral blood-paths being thus kept open, the brain tissue is kept better nourished than the other tissues of the body." Who is there among those who have reached or passed middle age that will not be rejoiced to find such admirable physiological warrent for the belief that the brain may continue to work, and even to improve, almost to the very last hour of life?—*Medical Record.*

A Remedy for Insect Stings.

A paint for the stings of insects is given in the *Medical News* in which ammonia is kept in close and prolonged contact with the affected part, and is prescribed as follows:

Aq. ammoniæ	m. cl;
Collodion	gr. l;
Acid. salicylici	gr. v.

A few drops to be applied to each bite or sting.

Early Diagnosis of Phthisis.

Bernheim, of Paris, presented at the Congress at Rome (*Bulletin Medicale*) a paper in which he called attention to the importance

of examination of the spleen and the lymphatic glands in cases of suspected tuberculosis. According to this observer the spleen is always enlarged in cases of tuberculosis, even in the early stages or the disease. This is a new diagnostic point in tuberculosis, and one which should be carefully studied. As a bacteriological test, it is exceedingly valuable in advanced cases, and is also applicable when the disease is in an incipient stage.

Fatal Case of Poisoning by Quassia.

Dr. Ferdinand Venn, of this city, reported the following case to Prof. H. C. Wood, who published it in the *University Medical Magazine* with the subjoined remarks:

On Friday, November 16, Mrs. M. came rushing into a drug store, stating that she had poisoned her child by a rectal injection of quassia for seat worms. She bought five cents' worth of quassia (two ounces) in the morning, poured hot water over it, and kept it on the rear part of the stove all day. In the evening she injected this fluid (about one pint). Five to ten minutes after the injection the child became livid, the lips losing all color; vomited once (contents of stomach), muscles entirely relaxed, and respiration labored. When I saw the child its lips were livid, the skin had a waxy hue, muscles relaxed, breathing labored and shallow, the pulse imperceptible. Death took place about one minute later. I tried artificial respiration, but to no avail. At no time after I saw the child did the heart pulsate; it seemed paralyzed.

I thought the mother might have perforated the intestine with the syringe (a case of that kind having occurred in our neighborhood about a year ago), but such was not the case.

So far as my reading goes there is not on record any case of serious poisoning by quassia. Nevertheless, the experiments of Hoppe show that the active principal is a poison in frogs, especially affecting the nerve trunks and the muscles. Fifteen milligrammes of it have caused a man violent frontal headache, vertigo, excessive nervousness, with pronounced evidences of toxic gastro-enteritis, such as burning pain, vomiting, and diarrhœa. Since receiving the foregoing letter from Dr. Ferdinand Venn I have had him make inquiries as to the possibility of there having been a mistake in the selection of the drug, but so far as can be made out no mistake was committed, and there is scarcely any drug that could readily be mistaken for quassia wood.

Uncontrollable Vomiting of Pregnancy.

Bonnet, (*Revue Obstet. et Gynec.*,) relates a case where the patient was twenty-two, and single. Her first pregnancy went on to term; but in the second, labor was induced at the fourth month in consequence of hyperemesis. During the early part of the third pregnancy vomiting became very severe, lasting a month, and reducing her to an alarming extent When just over six weeks pregnant, a laminaria tent was introduced; on January 14, 1890, the vaginia was plugged with iodoform gauze. For twenty-four hours the vomiting ceased. Next day the tent was removed, and the sickness returned. On January 17th two tents were introduced as high as possible. The vomiting again stopped, returning when the tents were taken out. The five tents were progressively introduced, and left in place for three days. The sickness stopped and did not return. The uterus showed no signs of contracting throughout the course of the above treatment. The patient took food well and grew stout. Seven and a half months later she was delivered of a healthy child at term.

Pathology of Vaginismus.

By Thos. More Madden, British Medical Association (*Med. Age*).—Abnormal sensibility attended with spasmodic contraction of the vulvo-vaginal orifice often comes under observation as a cause of dysparunia. In such cases the local hyperesthesia is evinced on any attempt at examination, and is most marked about the meatus urinarius or in the vicinity of the vulvo-vaginal glands and fourchette whence the hymen or its remains project upwards.

Without referring here to the different theories which have from time to time prevailed with regard to the general causation of vaginisms, or to the minor cases of this complaint, which are commonly sufficiently relieved by the topical application of methylene blue, cocaine, or other local analagesics, confining myself to the etiology and treatment of those graver forms of vaginismus, occasioning dysparunia, which require more serious remedial measures, I would presume to express my opinion, founded on somewhat extensive experience, that in the great majority of these instances the complaint is not only very intimately connected with the constitutional neurotic temperament generally evinced by such patients, but also that, hardly less frequently, it is also largely ascribable to a special local lesion, viz.: an abnormal condition, or neuritis, affecting the trunk or terminal fibrillæ of the punic nerve, one branch of which supplies the structures in the vicinity of the clitoris, whilst the other, or superficial perineal nerve, is distributed to the labia as well as to the perineum in which its terminal branches ramify.

Strychnia in Uterine Hemorrhage.

Strychnia is now considered a specific in uterine hemorrhage. It should be administered in one-sixtieth grain doses three times a day for a period of from four to six weeks before the time of labor, in all cases where there is a history of flooding. It will also prove of value where previous labors have been tardy, owing to irregular and feeble uterine contractions.—*N. Y. Med. Times.*

Electricity in Gynecology.

Dr. G. Apostoli, of Paris, the ardent advocate of the use of electricity in gynecology,

thus concludes an elaborate article in the *American Journal of Obstetrics:*

Intrauterine electrotherapy (faradic, galvanic, or sinusoidal) as advocated by me, prudently, rationally, and patiently applied, merits to remain at the head of conservative gynecological therapeutics for the following reasons.

1. Because in most cases it assures a symptomatic relief which often takes the place of cure.

a. Sovereign in its effects on endometritis and the principal functional troubles (amenorrhea, dysmenorrhea or metrorrhagia.)

b. Very efficacious against non-cystic fibromata.

c. Often useful—not always—in non-suppurative periuterine inflammation.

d. Powderless, of itself alone, against cystic collections of all kinds, and suppurating lesions of the pelvis or vicinity.

2. Because in the cases where it is inefficacious its failure to benefit can be made use of (by the attentive and harmless study of its reactions during and after application) to clear up or confirm a doubtful diagnosis, and thus to show the necessity of and hasten a surgical interference delayed or already refused.

3. Because if the immediate symptomatic results of its application are generally favorable, the ultimate results offer no less interest by reason of the subsequent pregnancies observed.

Eighty women treated by me, and solely by intrauterine electrical applications, have had, mainly, after a variable delay, but most often after the end of treatment, one or more consecutive pregnancies, which at once testifies to the symptomatic and functional efficiency of the treatment.

In conclusion, I maintain that gynecological electrotherapy, far from being hostile to surgery—on the contrary, often pointing out the way and showing the legitimacy of its indications—claims an important role, whether it be, as in many cases, to avoid a dangerous and useless mutilation; or, as in others, to emphasize the necessity of operative interference; or, in fine, in certain cases to complete the work of surgery which has exhausted its means, and rid in the most efficacious and prompt manner in the complete relief of symptoms and restoration of functions.

Ovarian and Tubal Diseases in the Causation of Sterility.

Ashby concludes a paper as follows: The adjustment of the tube and ovary during ovulation is effected in the human female by the most delicate mechanical arrangement, and may be defeated by trivial mechanical interferences.

In animals that habitually have multiple pregnancies a more perfect mechanical provision is made for the reception of the ovum by the tube. The number of ova impregnated seems to bear a close relation to the perfection of the arrangement which is provided for their passage into the tube. Thus in the bird will be found the most perfect type of mechanical adjustment, in women the most intricate and difficult.

The adjustment of the pavilion of the tube to the ovary may be set aside by the most trivial vices of structure and disease, resulting in absolute or relative sterility.

Sterility is due to minor diseases of tubes and ovaries to a greater extent than has been recognized. In an investigation of the etiology of this condition this fact should be considered in connection with an investigation of other causative influences.

The highest aim of surgery is to restore and not to destroy function. In the treatment of minor forms of ovarian and tubal disease this fact should be borne in mind. Organs should not be sacrificed to the rule of expediency, but should be preserved in deference to a law of genuine conservatism.—*The Am. Jour. of Obstetrics.*

Condition of the Bowel and Contents of the Sac in Strangulated Hernia.

Tietze reports as follows from observations in Mickulicz's clinic and from experiments on animals:

1. Bacteria may be present in the fluid at a time before structural alterations have occurred in the bowel wall where, at all events clinically, the bowel would be spoken of as above suspicion.

2. But this condition is not constant, and the bacteria are not present in such numbers as to modify our treatment. Clinically the fluid is to be regarded as sterile at this stage.

3. Not even in every case of gangrene of the bowel does the fluid contain living organism capable of development.

4. Against certain forms of bacteria the fluid of the sac, both in man and other animals, possess a destructive influence.—*Langenbeck's Archiv.*

Movable Kidney.

The author, Johnson, of Richmond, Va., (*Annals of Surgery*), reports seventeen cases of movable kidney, treated by operation. All of the cases recovered, and nearly all were traced to final results.

In no case was relapse noted, and marked improvement in general health was observed in most of the cases.

The technique employed was, in brief, as follows:

An external incision, beginning half an inch below the twelfth rib and extending downward and outward nearly to the crest of the ilium. The kidney is placed as nearly as possible in its normal position. The capsule is cut through and the edges reflected. A medium sized suture is then passed through the substance of the kidney itself, and the deep portions of the cut abdominal walls, but not ligated until later. The edges of the capsule are then sutured with fine silk to the deeper parts of the wound. The first and larger suture is then tied. The upper part of the external wound is then closed and the lower part packed with gauze The patients, as a rule, are kept in bed four weeks.

The Microbes of the Eye.

The researches of bacteriologists have shown that the conjunctival sac is a famous feeding-ground for microbes of all kinds. A very complete and learned review of the question by Dr. A. Guenod (*Gazette des Hopitaux*), shows the present status of the subject and indicates that, in time, all inflammatory conditions of the conjunctiva will be distinguished nosologically by their specific microbes rather than by the vascular reactions. Thus he shows that the acute catarrhal inflammations are due sometimes to the bacillus of Weeks and, more rarely, to a pneumococcus or streptococcus organism. The purulent conjunctivitis of genital origin is usually due to the gonococcus. Croupous conjunctivitis may be due to the bacillus of Loeffler, but is oftener a mixed infection.

In chronic inflammatory conditions there have been found the trachoma coccus (Koch, Poncet, Michel), the gonococcus, and a microsporon described by Noisewski. In xerosis, the bacillus of pseudo diphtheria is present. The bacilli of tuberculosis and of lupus also may develop in the conjunctiva.

According to Guenod, in the healthy conjunctival sac one never finds the microbes characteristic of the three principal forms of acute conjunctival inflammation (blenorrhagic, diphtheritic, and contagious catarrhal). Only exceptionally does one meet with staphylococci, streptococci, and pneumococci. The conjunctiva is, therefore, reasonably aseptic in healthy eyes. The constant flow of lachrymal fluid across its surface is believed to have some antiseptic influence.

Irrigation of the Naso-Pharyngeal Cavity in Infectious Diseases.

According to this author's experience, Dr. A. Heller, (*Sem. Med.*) irrigation of the naso-pharynx is an excellent therapeutic measure in infectious diseases, being usually followed by a more or less rapid diminution of the fever and other morbid symptoms, shortening the duration of the affection and preventing the production of diverse complications. He employs this "pharyngotherapy" (as he styles it) on the hypothesis that infectious diseases (except cholera and dysentery) are due to the inhalation of the infectious agent, which first localizes in the nose and pharynx, where it multiplies during the period of incubation. The virus penetrates thence into the blood and chyle of the organism, and the infection becomes general.

The author uses boiled water, tepid or warm, pure or with the addition of a small quantity of some saline antiseptic. The temperature of the liquid varies according to the sensitiveness of the subject, the degree of fever and the season of the year. Many patients bear well irrigations of water of as high a temperature as 50° C. These irrigations ought to be made by the physician himself; pressure should be feeble, the current being directed horizontally through the nares, the patient holding his mouth open, lest the injected liquid penetrate into the Eustachian tube. It suffices to inject through each nostril the contents of two or three pear-shaped syringe-balls twice a day.

This treatment it is reported, often immediately produces a considerable depression of temperature, affording marked relief. And, besides, it promptly improves the local lesions of the naso-pharynx, such as anginas of diverse natures.

The therapeutic action of these irrigations, it is said, is especially striking in erysipelas, which often promptly becomes benign and soon disappears. In diphtheria and croup, it peculiarly facilitates the throwing off of false membranes, and frequently arrests the symptoms due to septic infection.

In whooping-cough it removes the viscous mucosities from the posterior nares and the larynx, diminishes the number of paroxysms, and manifestly shortens the duration of the affection. In typhoid fever, these irrigations contribute greatly to moderation of the fever and cephalalgia, to dissipate the delirium and comatose condition, and to restore to the tongue its natural humidity. Finally, they are said to be equally useful in acute articular rheumatism (when the pharynx frequently constitutes the entrance to infection), in small-pox, measles, scarlet fever, tuberculosis of the respiratory passages, and in swelling of the glands of the neck in children.

Heart Disease.

Pawinski (*Therapeutische Monatscheft*) compares caffein natrio-salicylate with strophanthus and digitalis as follows:

In valvular diseases of the heart, with disturbance of compensation, digitalis and strophanthus are superior to caffein, but the latter can often do good service when the former are contraindicated.

In respect to regulating the heart rhythm, caffein is also inferior to the others; but in respect to excitation of diuresis, it is much superior. The best field for the administration of caffein is in diseases of the heart muscle, either functional or degenerative, and especially in the early stages of the disease. But in the later stages, when the heart, in consequence of progressive degeneration of the muscle fibers, is not able to perform its duty, and there are œdema, dyspnœa, and dilatation, then we must resort to digitalis.

Caffein is also indicated in acute insufficiency in patients whose circulatory system is otherwise healthy, such as after severe mental strain, moral commotion, and especially during fevers. In many cases also caffein produces a pleasant narcotic effect.

Lycetol—Antiarthritic.

Lycetol is the tartrate of dimethylpiperazine and appears to be fully as effective as the base Piperazine. Aside from the pronounced action of the latter as a uric acid solvent a favorable therapeutic effect can be anticipated from this preparation because its other component consists of tartaric acid which in the system becomes converted into

a carbonate and renders the blood more alkaline, besides exerting a diuretic influence. According to the theory accepted by many physicians as to the nature of gout, there is no increased formation of uric acid in this disease, but the blood of gouty persons is only faintly alkaline and therefore less capable of holding uric acid or the urates in solution. By the administration of this tartrate of a Piperazine derivative, therefore, the combined effects of its components are secured. Lycetol possesses the additional advantages of having an excellent taste and of being non-hygroscopic. Its aqueous solution has an agreeable acid taste and does not excite repugnance when administered for a prolonged period. Dr. Wittzack who has employed Lycetol in a number of cases of the uric acid diathesis with satisfactory results, observed a considerable increase of the secretion of urine after its administration. The remedy was well tolerated without producing any disturbance of the general health, and under its use the gouty symptoms subsided, and recurrences were prevented, and a considerable diminution of urinary gravel occurred. Dose 1.0 Gm. Pro Die.

Infection Processes and Mental Diseaes.

The endeavor to find a specific organism for every disease has even led specialists in nervous troubles to ask if mental disease can be due to a special organism, and Dr. Charles K. Mills in considering this subject in the *American Jonrnal of the Medical Sciences* concludes that:

1. Specific infection must be included among the causes of mental symptoms and diseases which precede, accompany, or follow febrile and other infectious disorders.

2. Much negative evidence can be adduced in favor of acute delirium or acute mania being due to toxemia—such evidence as is afforded by autopsies which reveal neither gross nor histological lesions; and in these cases the toxemia probably overwhelms the patient before the production of meningitis or other disease.

3. Analogies with nervous affections which are known or believed to be of microbic origin—such as multiple neuritis, myelitis and chorea—favor the view that insanities with similar or related phenomena and lesions are also microbic in origin.

4. The evidence afforded by careful bacteriological investigation of cases of acute insanity is thus far meager, and shows that various micro-organisms may induce the same or similar types of mental disease.

5. The mental disorders of pregnancy and the puerperal state are probably, in a considerable proportion of cases, toxemic, without reference primarily to childbirth; but it cannot be regarded as proved that a bacillus of either eclampsia or puerperal mania is the sole cause of these affections.

A New Cure for Hay Fever.

Fuber, of Hamburg, who suffered a great deal from hay fever during last summer, noticed that in winter a coryza was accompanied with hot ears, which regained their normal temperature when the discharge from the nose was established. He tried a reverse order of things on the hay fever, and rubbed his ears until they became red and hot. It is now the third summer he has led an endurable existence. As soon as there is the least amount of fullness in the nose, the ears are noticeably pale. A thorough rubbing of the ears has always succeeded in freeing the nasal mucous membrane from congestion. The rubbing must be thorough and repeated.—*Med. Reporter, Calcutta.*

Prophylaxis of Consumption.

"A few points on the avoidance of the greatest danger to human life," should be the full heading. Consumption destroys more lives than any other cause.

The first point is that the matter which those sick with lung troubles cough up must be temporarily and permanently disposed of in such ways as to avoid all danger from it.

The infectious matter of the expectoration must not be allowed to dry, for it will then fly into the air and be inhaled.

The cuspidor, or other vessel, which receives the sputa, should contain a little water, or preferably a five per cent. solution of carbolic acid (Solution E.) or of Lysol.

Flies should not be allowed to be the carriers of infection; therefore cuspidors and spit cups should have covers in warm weather.

Each cuspidor should be filled with boiling water, when it is to be cleansed, its cover should be re-applied, and it should then be allowed to stand until it is cooled. One reason for prescribing that only a small quantity of water shall be put into the cleansed vessels, is that the boiling water may act as a disinfectant.

Each sick person must, therefore, have two cuspidors—one in use and one undergoing disinfection and the process of cleansing.

The rooms in which consumptive persons dwell or sleep should be furnished in such ways as to minimize the danger of their retaining infection and to permit their cleansing easily and safely. Carpets should not be in use, wooden floors with a few rugs are best; straw matting is permissible. The idea is the avoidance of raising a dust in sweeping. The floor or floor covering should invariably be cleansed by wiping with a damp cloth, never by sweeping with a dry broom.

The one main point in all this is to keep the infectious dust out of the air of dwellings, that it may not be inhaled.

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ORIGINAL ARTICLES.

AUSCULTATORY PERCUSSION AND ALLIED METHODS OF PHYSICAL DIAGNOSIS.*

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The value of acoustics in the investigation of the viscera is such that the term "Physical Diagnosis," without qualification, is usually understood to refer to methods in which, by the senses of touch and hearing, cognizance is taken of the vibrations of the various internal organs. It is important to note that we have to deal with sounds produced in at least three different ways:

1. Localized vibrations due to the friction of a fluid.

2. Localized vibrations produced by the mutual friction of solid tissues.

3. Resonant vibrations, by the thrill of some anatomical or pathological unit.

Under the first head, may be considered the auscultation of breath-sounds, of the circulatory organs (including the heart, both fœtal and adult, the umbilical, uterine and other large arteries, the cervical and other veins, the thyroid body, aneurysms, the cerebral pulse), of the gastro-intestinal tract (with special reference to direct and regurgitant murmurs at the cardia), and, theoretically, at least, of the superficial urinary organs. It is possible that urethral stricture might be located by the stethoscope and that, in certain lesions of the renal pelvis when the relative flow of pus or urine through the ureters is of diagnostic importance, a special instrument for vaginal auscultation may prove to have a practical value.

Frictions of the second class occur normally only from the movements of the fœtus in utero. They are heard under more or less abnormal conditions in joints, at the line of fracture of bones, sometimes in tendon-sheathes—a case might be cited in which the long tendon of the biceps was involved—and in the true serous sacs, especially the pericardium and the pleuræ.

Widely different in principle from these local frictions, is the resonant thrill of an organ. The so-called muscular quality of the heart-sounds is due to such a vibration but, manifestly, it cannot be separated in practice from the tap of the valve-leaflets. Three methods are commonly used in the investigation of resonance; auscultation of voice sounds, in which we judge of the condition of the lung and pleura by the conduction of vibrations to the surface, percussion and palpation, by which last we seek to appreciate acoustic vibrations vicariously by the sense of touch. In ordinary percussion, also, tactile sensation is, with many persons, an aid to the appreciation of resonance. While the tyro or the clinician in his demonstrations to a class, aims merely to produce a sound and may prefer an artificial plexor and pleximeter, an experienced diagnostician,

*Being the Merritt H. Cash Prize Essay of the Medical Society of the State of New York, 1895.

making an examination for his own benefit, almost invariably uses his fingers and depends largely on tactile perception of the vibrations produced. Much may be learned in this way from a perfectly silent percussion.

It has been implied that sounds produced by throwing an organ into vibration are heard over the whole organ. This is true providing all parts of the organ have the same consistency, as in health, but in disease, some part of an organ may become so altered as to vibrate quite differently from the normal structures. Thus, in lobar pneumonia there is commonly dullness amounting sometimes to flatness, in the lower lobe of the right lung. The writer remembers a case of moderately severe catarrhal pneumonia, in which a zone of infiltration in the middle of the left lung posteriorly, was so sharply defined from resonant lung above and below as to suggest the possibility of a trilobate division. The significance of the words "anatomical or pathological unit" is now apparent. Except in the case of the lungs, disease rarely affects an organ in such a way as to cause one portion to vibrate differently from another; hence in the investigation of the heart, liver, spleen, stomach, intestine and bladder we expect to gain only such information as depends on the question of size—or, in the case of the hollow organs, fullness. A solid tumor of the stomach or bowel affords a marked contrast to the normal tympany, but only when of such size and location as to be quite readily palpable.

The ordinary observer, in the use of percussion, recognizes two degrees of resonance—pulmonary and gastro-intestinal or tympanitic; and two degrees of flatness, absolute flatness and dullness. Nicer discrimination may be made by an acute ear, as in the diagnosis of pulmonary cavities. The gastric tympany is usually about a semitone lower in pitch than that of the colon, while the tympany of the small intestine is still higher; pitch in general varying inversely as the calibre of the resonant body.

By ordinary percussion no distinction can be made between the resonance of the two lungs; hepatic, splenic and cardiac dullness are alike and, practically, it is usually impossible to mark the exact boundaries of the heart and the liver where they approach. Moreover, the overlapping of organs obscures diagnosis and, in particular, the right border of the heart cannot be defined by percussion except by an expert; while distended intestine may lead to the erroneous conclusion that the liver is contracted and splenic dullness may be altogether concealed.

The object of this paper is to call attention to methods of physical examination with which the majority of the profession are unfamiliar, and, for part of which, some originality is claimed. These methods all depend upon the same principle—the setting up of vibrations in an organ and, by excluding indirect conduction of sound, locating the boundaries of the organ by auscultation of its resonance. Perhaps a homely comparison will enable us better to appreciate the problem and the means of solution. Suppose one wishes to trace a system of pipes through a building. If the pipes are of different sizes or if they convey different fluids, for instance gas and water, ordinary percussion will elicit notes of so different quality that the matter is easy. If, however, the pipes are of the same size and filled with gas, no amount of percussion will afford an idea of their continuity unless we listen first at one pipe and then at another and note that, in one case, the sound of tapping is conducted directly to the ear while in another only a diffused noise is heard.

In the case of structures so close together as the viscera, we must limit the conductivity by some form of aural transmitter—of which the stethoscope is the commonest example—and it is this aid to percussion that has given rise to the term auscultatory percussion. The term is objectionable since *auscultatory* by no means implies the use of an instrument. Stethoscopic percussion would be a preferable term, although the language critic might object that a stethoscope is literally a *chest-looker*, while its use is not confined to the chest and it is only metaphorically a *looker*. Not to quibble over a question of nomenclature, it must be recognized that auscultatory or stethoscopic percussion is not merely ordinary percussion aided by an instrument. Ordinary percussion seeks to elicit a characteristic note whose pitch and quality shall enable us to distinguish one anatomical or pathological unit from another of different structure. In auscultatory percussion, on the other hand, almost no attention is paid

either to pitch or quality. We simply endeavor to locate the boundaries of an organ by noting when the sound of percussion becomes suddenly feeble. So long as both plexor and stethoscope are over the same organ, the sound conveyed to the ear is peculiarly sharp and penetrating. As soon as either passes the limits of the organ, the sound becomes dull and diffused. It makes no difference in tracing the pipes through a house, whether the listener is in the attic and the percussor in the cellar or vice-versa. Analogously, it matters not whether the stethoscope is moved or the tapping finger, except that, for the sake of convenience, the instrument is usually held stationary at about the center of the area to be defined. The exact point of application is not important, except that it should be somewhere within the area in which the organ to be investigated is in contact with the body-wall. These areas are easily found by ordinary percussion and they are described or illustrated in most anatomies and works on physical diagnosis. The best example of the radical difference between ordinary and auscultatory percussion is to be found in the examination of the lungs. The former method reveals no partition into two organs, except where the mediastinum widens out; the latter method draws the line as closely as nature herself.

The demonstrable (not the anatomical) cardiac area, as usually taught, is limited by the third rib, the nipple line and the right border of the sternum. The lower portion of the right boundary is obtained by drawing an imaginary line to the palpable apex. The examination to obtain these limits involves almost painfully hard percussion in order to strike below the superficial pulmonary resonance; it is, moreover, tedious and many physicians are unable to find the right limit of the heart. By auscultatory percussion almost the whole cardiac area may be mapped out, and it is nearly as easy to diagnose distension of the right side as outward enlarge ment of the left ventricle.

A graphic representation is not so important in the case of the thoracic organs as in that of the stomach and liver, since changes in the former are easily located by bony land-marks. Moreover, the diagnosis of pulmonary and cardiac disease does not depend so largely upon the determination of areas as it does in the case of the stomach and liver.

The spleen varies in size, even physiologically and temporarily. Some go so far as to say that the normal spleen is not percussible; others, while admitting that it has a definite area of dullness, confess that in many instances they can not locate it. From its position at the side of the body where the ribs have their greatest convexity and from its lack of definite shape, the graphic representation of the spleen on a plane surface is not especially important, yet an approximate estimation of its size is often of the highest value. Malaria, leucocythæmia, malignant lymphoma (Hodgkin's disease), carcinoma, almost all septic conditions of the intestine, various interferences with the portal circulation, infectious fevers, even without intestinal lesion, are among the causes of splenic enlargement. While in many such cases the finding of a large spleen is simply a verification of a diagnosis already well established, in other cases the condition of the spleen is of great importance. Those cases of hepatic cirrhosis without demonstrable change in the liver itself, are among the most puzzling which confront the physician, and the fact of splenic enlargement, not otherwise explained, throws light on the hepatic condition. Again, a case of deep tumor in the region of the left kidney may be cited. With splenic enlargement, some implication of the intestine or, possibly, carcinoma would be thought of. The spleen being of normal size, both these conditions were excluded and the probable diagnosis was made of renal sarcoma which is not prone to anastomosis. The diagnosis was confirmed by hæmaturia. Such cases illustrate the benefit of ausculatory percussion as a far more delicate means of investigation than ordinary percussion or palpation.

It is rather difficult to state exactly what the area of the stomach should be. It varies greatly within normal limits according to the time after eating and the amount of gas produced during digestion, while authorities differ as to its location when distended. Moreover, we can not expect to map out the most deeply seated parts of the organ, any more than to locate the summit of the dome of the liver, which rises at least a rib higher than even the heaviest percussion indicates. The

usual limits of the area of gastric resonance may be assigned as follows. A vertical line extending for an inch or more about the mid-point between the xiphoid and the umbilicus marks the right limit, although the organ itself extends further and a slight transgression of the resonant area is not sufficient to establish the diagnosis of dilatation. The lowest point of the stomach is about an inch, or an inch and a half above the level of the umbilicus and about half way between the median and the axillary line. The left curve varies greatly according to the degree of distension. The anatomies usually picture a thoroughly distended stomach whose extreme left limit is at the level of the seventh rib, touching the thoracic wall laterally, while the highest point of the curve is just inside the nipple in the fourth intercostal space. On percussion, these limits are seldom or never reached. Usually, in a stomach distended as much as possible without spontaneous relief of pressure through the œsophagus, the highest and extreme left points coincide, falling on the sixth or seventh rib and as far to the left as the thickness of the thoracic wall will allow. From this point, there is a sag downward and to the right. One would get the impression from the percussion area, that the cardiac opening of the stomach was at the highest left point; on the contrary, it is located posteriorly and only slightly to the left of the median line. The sag from the highest point, therefore, corresponds not only to the anatomical lesser curvature, but also to the upper part of the greater curvature. Owing to the different degrees of distention of the stomach, to the manner in which it touches the abdominal wall, to the weighing down of the lower part with food or liquid, and to the muscular tone which naturally tends to keep the organ somewhat contracted, the percussion area varies very greatly and it may be considered normal if it falls within the extreme limits mentioned.

The direction of the axis of the stomach is a matter of some dispute. Quain's anatomy represents a distended stomach whose axis is about 55° from horizontal. Luschka figures a stomach inclined at about 45° and passing an inch or more to the right of the median line. At autopsies a marked variation is seen. Since the term gastroptosis was first used, some controversy has arisen as to the normal direction of the stomach, some claiming that the axis of the organ is nearly horizontal, others that it deviates only 20° or 30° from the vertical. Speaking with a limited experience, the writer believes that, in short persons, the axis of the area of gastric resonance is considerably less than 45° from the horizontal, while tall, long-chested persons have a gastric axis with an inclination of 45° or more. This statement applies to clinical appearances and not to the findings at autopsies. It is uncommon to find a stomach that reaches more than a quarter of an inch to the right of the median line, while, without any marked dilatation, the greater curvature may sag as low as the umbilicus. This is especially true of flabby, atonic women who compress the waist with corsets. The whole question reminds one of the controversy among gynæcologists as to the normal position of the uterus. Certainly, the physiological deviations of a soft organ like the stomach are much greater than those of the small and rigid uterus.

The writer would like to call attention to a fact to which most text-books do not allude, namely, that the greater curvature of the stomach, as mapped out by percussion, is, in most instances not a simple convexity, there being usually a slight concavity in the middle of the curve, marking a tendency to the division of the organ into two digestive compartments.

The area of liver dullness begins, on deep percussion, at the fourth rib. The nipple is usually at this level but, not very rarely, it varies on one or both sides, even in men. In women with pendulous breasts it has no value as a land-mark. As the lung substance intervening between the liver and the chest-wall becomes thinner, dullness increases, until at the sixth rib in the nipple line, there is almost absolute flatness. The liver extends to the costal arch. Palpation usually reveals the left lobe of the liver in the epigastrium, but ordinary percussion and palpation afford only the vaguest notion of the contour of the organ. By auscultatory percussion, on the other hand, it is possible, in most cases, to map out practically the whole liver, and overlapping intestine does not materially obscure the findings, whereas with ordinary percussion, it may lead to a diagnosis of contracted liver.

When we remember that the physical

diagnosis of liver troubles depends almost entirely upon the determination of "back pressure" of blood, lymph and bile, and of the size of the organ, the value of even the slightest increase in our means of examination becomes apparent. The writer recalls a patient who had no ascites nor œdema, no hæmorrhoids nor other prominent veins, no jaundice and, for the time being, no disturbance of digestion, yet his liver was scarcely two inches in vertical diameter. Much doubt was felt as to whether the apparent contraction of the liver was not due, at least in part, to distended intestine in the right hypochondrium. Auscultatory percussion would have settled the question at one examination; without it, a positive diagnosis was not made except after several examinations and after securing some significant history.

By auscultatory percussion, the colon can be quite accurately distinguished from stomach and small intestine. The extreme length and complicated coiling of the small intestine prevent its resounding as an anatomical unit, so that auscultatory percussion is, in this case, of little value.

The examination of the pregnant uterus and of various large tumors of the pelvic organs is greatly facilitated by auscultatory percussion. It would seem that one with a gynæcological practice, might so perfect the art of external diagnosis that cœliotomies would not reveal so many totally unexpected conditions of the pelvic interior.

Under ordinary circumstances, it would seem presumptuous to present an essay dealing largely with the general principles of a branch of medical art publicly reported more than half a century ago. Yet, unless recently, the majority of graduates in medicine have left college totally uninstructed in auscultatory percussion, and comparatively few physicians make practical use of it. Thus, one who wishes to become expert, must, as a rule, depend upon his own exertions, aided only by general directions to be found in a few text-books and some articles on this neglected method buried in files of medical magazines. Under these circumstances, some explicit details of the technique of auscultatory percussion may be allowable. While the early authorities recommended a hard-wood monaural stethoscope, the writer believes that any form may be used, and that the binaural instrument is preferable, since it shuts out more completely extraneous sounds. No pleximeter is necessary, thus the physician, holding the stethoscope in one hand and tapping with a finger of the other, needs no assistant. The writer uses for all purposes a Camman chest-piece to which are fitted flexible rubber tubes terminating in hard rubber ear-pieces. This instrument has only two advantages over the ordinary Camman stethoscope; it is portable and, since the ear-pieces must be made to fit tightly into the meatus, it cannot usually be of service to any but the owner, so that the transmission of cerumen from one person to another is avoided. It is a physiological fact that a person accustomed to listening with both ears refers sounds heard with only one ear to the ear itself and thus, there being no distraction of attention to note the direction of the sound, its pitch is a little more sharply defined. Accordingly, the writer has devised a flexible monaural stethoscope which answers the purpose well if the opposite ear is stopped.

The writer would also report the following original methods of investigating visceral resonance. All are used in connection with a stethoscope and no new principles are involved. All are solutions, more or less perfect, of the problem to substitute for percussion a more convenient method of exciting visceral vibrations:

1. Instead of tapping, friction may be used to originate vibrations. The rubber tip of a pencil answers well, or even the end of a dermograph. The choice between friction and percussion depends largely on the sensations of the patient.

2. A tuning fork fitted into a hard rubber handle, is set into vibration and closely applied to the body wall. This method causes neither tenderness nor tickling, as percussion and friction, respectively, sometimes do, while it is even more delicate as a test. (See Chart 4).

3. The tuning fork has the disadvantage of vibrating only for a short time and the repeated snapping of the tines is rather tedious. In order to obtain a continuance of the vibration, a portable Faradic coil has been prepared, the hollow core serving to conduct the vibrations of sound to the body. Within certain limits, it is possible to guage the pitch of the hum-

ming note and, thus, to set up vibrations best adapted to the transmission of each particular organ. It will be understood that the coil is not used as an electrical instrument, the secondary wires being cut short.

On account of the trouble of carrying a battery and of keeping one in order, the writer has found the finger and the tuning fork to be the most convenient means of instituting resonant vibrations.

Contrary to what might be expected, the nature of the body-wall has very little influence on the conduction of vibrations. Thus, in moving the source of vibration —percussing finger, pencil, tuning fork or coil—along a rib, the sound diminishes when the limits of the organ are passed quite as suddenly as if the examination were made over the soft abdominal wall. So too, in passing from rib to intercostal space, the conductivity of the underlying organ is not affected. Although the deepest portions of organs can not be outlined, parts may be mapped that are certainly overlain to a moderate dephth by other viscera.

It is usually advisable to mark the limits of an organ with a dermograph. Tracings may then be made to preserve a record of the case. Photography would naturally suggest itself as a means of reproducing the outlines in their relation to superficial landmarks, but it is impracticable to have the necessary apparatus and assistants always at hand; many patients would object; the expense must be considered; and, most important of all, the lateral regions of the body would appear so foreshortened in a photograph as to give false notions of the actual areas, and it would be difficult to focus either to a life-size or to a uniform scale of reduction. The accompanying photograph is practically, a failure. The patients were boys about twelve years old, presenting symptoms of cardiac hypertrophy. Auscultatory percussion demonstrated that the condition was a neurosis, the cardiac area not being in the least enlarged.

THE TREATMENT OF DIPHTHERIA.

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The treatment of diphtheria by antitoxine may be the treatment of the future, but it will be a long time before the remote country doctor can always get the remedy when needed; meanwhile he must use what he can get.

Although no longer in active practice, I would like to recall attention to a plan of treatment which I made known in 1862, and which then raised a perfect cyclone of denunciation. One medical editor kindly hoped I would never get another diphtheria patient to treat; but if I did and it proved fatal, as was certain to be the case, I would be prosecuted, and he would cheerfully testify that I was guilty of murder. I did get a good many cases within the year, and when, in 1863, I made known the number of cases treated and the number of recoveries, old Professor D—— remarked, "Young man, it is evident you don't know diphtheria when you see it." Then I thought the old Nestor rather hard. But since we have imported the malignant bacillus, the benignant bacillus and that other little joker which breeds either way, or both ways, according to its own sweet will, I wonder if he always knows.

I saw diphtheria for the first time in 1858, and every case I had, saw or heard of, was fatal. Still I had learned something—mostly what not to do. In 1859, a case occurred close to my office, and having more time to dispose of than anything else, most of it was passed with my patient; and for her age (six years), she was an ideal patient. I had the satisfaction of seeing her convalescent, and thinking I had learned a great deal. I soon found that I knew more than I wanted to know—I had diphtheria myself. I called in my old preceptor and by his advice, treated the case on the same lines as the preceeding one. Believing it a local disease, and that the general system was

poisoned by absorption, I reasoned that three things should be attempted: prevent or limit absorption from the throat (belladonna); neutralize the poison at its place of origin (protiodide of mercury); eliminate it from the system (calomel).

Saturated solution Potass. chlorat.... q. s

Sig. Wash the mouth and throat with the solution, and then swallow a teaspoonful just before each dose of medicine.

Protiodide of mercury..... gr. s iij
Powdered white sugar..... ʒ iij

M. and divide into 24 powders.

Sig. One powder every 2 hours. Place in the mouth dry, and swallow slowly as dissolved. Allow no food nor drink under 15 minutes after taking.

Calomel ..... gr. s xxjv
Ext belladonnæ..... ... gr. s vj

M., and ft. pil. 48.

Sig. Two pills every 2 hours, alternating with powders, until the bowel has moved twice; after which one pill at a dose. Omit occasionally if the bowel moves too often.

Continue this treatment until the throat is free from false membrane, and then give quinine and tincture of iron.

There is another drug of which I have always made much use, and which has prevented me having much experience with post-diphtheritic paralysis. Strychnine, given early and freely, will almost always prevent its occurrence. Alcohol is often recommended for its action on the heart. Belladonna is far preferable, but strychnine is the thing to tie to every time. Never give alcohol. It is an anesthetic to the higher nerve centers, whose sole superiority to other anesthetics consists in its more prolonged action. It is given, also, to retard tissue change. Now, in poison from snake-bite, if tissue change can be delayed a few hours the poison is eliminated and the patient recovers. If strychnine cannot be given hypodermically, alcohol is of use. If strychnine can be so given, it is infinitely better. But the elimination of the diphtheritic poison is not a question of a few hours, but of many days. I do not expect to live to see alcohol religiously excluded from use in diphtheria, but some of the young men now in the profession will see it.

I wish here to call attention to the *diphtheritic pulse.* It is almost, if not quite as characteristic of the disease as is the eruption of scarlet fever. Probably all who have treated diphtheria know the pulse of the later stage, which is caused by granulo-fatty degeneration of the heart muscle. But I refer to the pulse in the early stage, which is caused by the poison acting on the nerve centers, and if carefully compared, the pulses will be found quite different. A little consideration will show that this is necessarily so. As the disease progresses the original cause is still acting with a constantly increasing power, and in the later stage this is complicated with the action of a degenerated heart muscle. I do not know whether this pulse can always be detected before the appearance of the false membrane, or not. Most of my knowledge of the disease was acquired in country practice, where one is seldom called until the membrane can be seen. It was my practice when treating a case, to examine the throat and pulse of each member of the family daily, or oftener if possible, and I have found it twelve to twenty-four hours before the appearance of the membrane—occasionally in persons who claimed to feel perfectly well. During the later years of my practice, when I found a member of a family with this pulse, he was put on the diphtheria treatment, and often no membrane would form. In two or three days the pulse would lose its diphtheritic character and return to the normal, thereby proving to my satisfaction that it was caused by the poison acting on the nerve centers.

It is true that if alcohol is given when the heart is first affected, it apparently is of benefit. The pulse becomes lower and fuller, the surface cooler and the patient brighter. But this cooling, consequent upon the dilation of the cutaneous capillaries, must be made up by an increased expenditure of vital force. As alcohol retards the elimination of the poison, it is deleterious. The most convincing argument I can conceive for its use in the late stage is that, "the hair of the dog ought to be good for his bite." I have long and firmly believed that a large proportion of the diseased kidneys found by European observers at autopsies on those dead of diphtheria, was caused by alcohol.

It is well known that in this last stage, children bear a large amount of alcohol without intoxication, and some report with apparent satisfaction the quantities prescribed. In one case, "8 f ʒ of good brandy in twenty-four hours, to an eighteen months' old baby." At last accounts, the doctor was still cogitating whether that "good critter of God," *good old brandy,* could have had anything to do with the baby's death.

Thirty-six years are passed and I still

have a vivid recollection of the increased discomfort, and as I thought aggravation of symptoms, produced by cow's milk, when fighting diphtheria in my own person. So I never used it if it were possible to feed the patient on anything else. Keep him as near as possible on his usual ration of solid foods.

In treating many diseases it is not well to waken a sleeping patient to give medicine, but in this disease, until the throat is clean or rapidly clearing, it should be done if necessary; for the frequent repetition of the dose is of prime importance.

Of the hundreds of cases treated on this plan not one was salivated, nor did a case of kidney disease develop. If albumen appeared in the urine it was disregarded and soon disappeared without special treatment. I induced a few of my medical friends to adopt this plan, and none of them ever relinquished it except with life. True, like myself, they would try some so called scientific plan, and like me come to grief and return to the old plan. When the "bichloride" treatment became fashionable I took it up with a good deal of confidence and for a time was well pleased with it. True, my cases got well no quicker than usual, but they did well and it was scientific. At length diphtheria attacked a family of seven persons. Five of them yielded to the bichloride treatment, and two (a child of two years and its mother) seemed in a fair way to soon yield to the undertaker. The bichloride was stopped and they were subjected to my tried formulæ. In less than thirty-six hours no membrane was to be seen in either throat. That was my last experiment with new modes of treating diphtheria.

It was my custom to use chlorate of potash and tincture of iron as a prophylactic. As soon as a case occurred, the entire family used the gargle and took the iron and potash in sufficient water. It often happened that when diphtheria attacked one of several children living in a miner's cabin of one or two rooms, the thermometer constantly below zero, no other case would develop in that family.

It is, perhaps, needless to say that the dose of belladonna may require reduction; but it should be given in doses as large as can be born. If fed on solid food, most patients can take the protiodide in he doses recommended. If trouble occurs it often can be overcome by giving a little of the home-made extract of beef a few minutes before the medicine. When made in the old-fashioned way, by boiling the finely-cut beef in a tightly-corked bottle, it is for this purpose superior to any of the proprietary, trade-marked extracts. When preparing the powders for children, it is well to increase the proportion of sugar somewhat, as the protiodide is thus more certain to reach every part of the throat.

The test of a successful treatment can not be made by a few cases, nor in one or two years. From 1862 to 1867, not a single case that was treated on this plan for twenty-four hours with even a fair degree of regularity, was fatal. I felt a good deal like bragging, but determined to wait until 1869, which would give a trial of ten years. The fatalities of 1868 took all the conceit out of me. Yet, as I look back and find a mortality of less than 17 per cent. for that year, and take into consideration the ignorance and filth of a majority of the fatal cases, I do not think it a record of which one need be ashamed.

Migrain.

Migrain, according to Dr. J. H. Kellogg, in *Modern Medicine*, is due to a high degree of acid fermentation or an excessive quantity of mental chloro-organic compounds. In both conditions the stomach contains a vast quantity of toxic substances, which when absorbed into the blood, induce a veritable toxæmia and utellectual activity, is an exciting cause of the disease, and through the fact that, by a morbid reflex action downard, it increases the hyperæsthetic conditions of the abdominal sympathetic, and at the same time retards the digestion, and so favors both the production of toxines, which are the direct cause of the disease, and the susceptibility of the sympathetic to the action of these poisonous substances.

Viewed from this standpoint, migrain is no longer a complex or mysterious malady, but simply a state of systematic poisoning, the origin of which is decomposition of food products in a dilated or prolapsed stomach, which, through motor insufficiency, is unable to unload itself of its contents with sufficient promptness to prevent septic and putrefying processes.

ACUTE CATARRH OF THE MIDDLE EAR OF AN EPIDEMIC CHARACTER.*

SETH SCOTT BISHOP, M.D.,† CHICAGO, ILL.

This case is typical of a large experience we have had since the fore part of last January, with a certain disease that invades the nose, throat and ear. When you inspect this man's ear you will see a drum-head that presents the characteristic appearances in acute inflammation of the middle ear resulting from the epidemic influenza. These cases differ from the simple acute inflammations that occur in the intervals between the grip epidemics. The drum-head in this case has a peculiar mottled appearance due to extravasation of blood in patches, so that, instead of a turgid condition of the malleal plexus of vessels, a cherry-red color of Schrapnell's membrane, or a diffuse redness extending quite equally over all the membrane, we have ecchymoses in several parts of the drum-head.

The whole membrane is thickened, bulging with muco-serous effusion into the tympanic cavity and has a roughened, leathery appearance. The pain is intense, due to the tension upon the nerves distributed to the drum-head, and to the pressure of the secretions on the sensitive walls of the middle ear. You will observe that the patient winces when I draw upon the auricle to straighten the canal, or when I press upon the mastoid process.

There are symptoms of incipient mastoid periostitis—tenderness, redness and pain, but not, as yet, any appreciable swelling. At this stage the periostitis can be aborted, but we are not so sure that we can prevent suppuration in the middle ear. The probabilities are that we cannot, for middle-ear inflammation, as a complication of the epidemic influenza, is very prone to terminate in suppuration.

This man says he was taken with an attack of the grip five days ago, and that the ear began to pain him two days since. The mastoid pain came on last night, so you see we have an early opportunity to cut short the mastoid trouble. If there was no effusion into the middle ear and consequent bulging of the membrana tympani, we would rely upon warm instillations of twenty per cent. solution of cocaine, and leeching to relieve the pain and inflammation, but the condition present indicates a paracentesis, which I shall proceed to make in the posterior, inferior quadrant of the membrane, so as to give the most perfect drainage.

We will first use the cocaine, which will render the operation much less painful than it otherwise would be. Here we have an animal membrane with an alkaline fluid on one side, of greater density than the aqueous solution on the other, so that by the resulting endosmotic force the cocaine is brought into contact with the inner mucous coat of the drum-head. This fact explains why cocaine is much more effective in producing anæsthesia of the drum membrane in these cases than in those in which the tympanic cavity is in a dry stage of inflammation.

Now that we have opened the membrane, you will see that the discharge is quite copious. It consists of serum thickened with mucous and mixed with blood. Probably the drum-head would have ruptured spontaneously in a day or two if left alone, but we have afforded relief to the patient and insured an opening for the exit of discharges in the most advantageous location for free drainage.

We will use counter-irritation to subdue the mastoid periostitis. The patient will be instructed to apply a mustard plaster to the skin surrounding the auricle, and to keep up a continuous irritation for two

* A clinical lecture delivered at the Post-Graduate Medical School and Hospital of Chicago.

† Professor of Diseases of the Nose, Throat and Ear in the Chicago Summer School of Medicine, etc.

days, but without blistering. We should take pains to give the minutest instructions in all details for home helps in the treatment of these people, otherwise we will not obtain the expected results. The most surprising mistakes occur unless we are patiently explicit in giving directions. For example: A worthy dame was told to procure a half dozen leeches for her husband, who was suffering severely, but through some oversight she was not definitely instructed in the art of applying them. At the following clinic, when asked if the leeches relieved her husband, she astonished the assembly by replying, "Sure doctor, but my man did not like them raw, so I fried them for him."

You will notice that this patient's general condition is bad. When he entered the clinic we observed that his countenence was pale, great drops of sweat stood on his brow, he was weak and shaky, his tongue was covered nearly to the border with a dirty gray fur. It was indented by the teeth, flabby and tremulous. He presented the appearance of a man who had been wrestling with a painful, exhausting disease that was getting the mastery of him; but we can confidently predict that the mastoid inflammation will be subdued within two or three days, and probably the ear will be restored to a good condition within as many weeks. Remember that the cure is not complete when the ear ceases to discharge. It must be treated after all discharges cease until it returns to a healthy condition. This is the point where many physicians and the laity generally commit a grave error. They imagine that the ear needs no care from the instant that they can see no discharge. They discontinue treatment there and abandon a diseased ear to its unhappy fate. Then they marvel that the hearing fails and that each succeeding cold in the head leaves them worse off than they were before.

The general condition of this man needs attention. He is constipated and worn with harassing pain. We will give him a small cathartic dose of calomel to-night and follow it with an effervescing saline laxative in the morning—flush the sewer. We will give him for the pain one-eighth of a grain of morphia combined with one-four-hundredth of a grain of atropia. For loss of strength and appetite he will have two grains of quinine with a tablespoonful of coca wine (Vin Mariani), four times a day. If the quinine produces any subjective noises, sensation of stuffiness in the ears or impaired hearing, it will be discontinued, and strychnine, digitalis and iron substituted.

During the epidemics of influenza I have observed that the aural complications usually appear about the fifth day after the seizure. The pain is intense and exhausting. The effusion of serum occurs sometimes in a few hours after the pain comes on, within twelve or twenty-four hours. In children the first symptom that attracts attention is worrying or crying, pressing the ear against the mother or nurse, or carrying the hand frequently to the ear, followed shortly by a watery and bloody flux from the ear. Usually the discharge commences within forty-eight hours of the beginning of the earache. The proportion of cases in which there is a mastoid involvement is vastly larger than in simple acute otitis media occurring in the intervals between the epidemics. The tendency to suppuration is far greater than in the intervals. The constitutional disturbance is more profound and the disease is less easily controlled. General treatment is quite as important as special. Antipyrine, phenacetine or guaiacol may be indispensable to reduce temperature. Rest should be enjoined and the surface temperature should be kept equable by confining the patient to the bed for a few days. Relapses are more likely than at other seasons, and the patient should not be discharged as cured in less than a week after all symptoms have disappeared.

For home treatment we will instruct this man to syringe his ear, whenever it fills with discharge, with a quart of water as warm as can be comfortably borne, but it must have been previously boiled for a half hour in order to sterilize it. Then he will instill into the ear a warm saturated solution of boracic acid in rose water. Some one suggests that an alcoholic solution be used. I have seen it tried, but I have not the temerity to experiment with alcohol in an acute inflammation of the eye or ear. The solution will be left in the ear while he lies on the opposite side for ten minutes, then allowed to run out and a small piece of absorbent cotton will

be lightly introduced into the mouth of the canal to protect the drum from cold air and foreign matters. For his naso-pharyngeal catarrh he will spray his nose and throat every morning and night with a three per cent. solution of camphor-menthol in lavoline.

The subsequent treatment to be pursued in our clinics to complete the cure will form the topic of another lecture.

ACROMEGALY.

E. L. BULLARD, M.D., WAUKESHA, WIS.

In 1885, during his term as chief assistant to Charcot, Pierre Marie observed in the clinics of the former, two unique cases characterized chiefly by an enormous development of the hands, the feet and the chin. The following year, in the *Revue de Medicine*, he wrote an exhaustive description of these remarkable dystrophies and designated this disease, which had hitherto been unrecognized as a distinct pathological entity though its characteristic symptoms had been noted by Sancerotti as early as 1772, Acromegaly. Von Recklinghausen prefers the name Pachyacria as being etymologically more accurately descriptive; and in accordance with a custom which has the sanction of long usage, this affection has also been named after its discoverer, Marie's Disease. After the attention of the medical world had thus been directed to this interesting malady, other cases were reported by various authors, chiefly European, and up to the present time, according to Osborn, (from whose article in the *Reference Handbook of the Medical Sciences* I have made copious extracts in this paper) about one hundred cases have been recorded. Among this number, however, there were several cases concerning which the diagnosis was not well established, this disease having been confounded, in many instances, with gigantism, myxœdema, exophthalmic goitre, etc.; and, per contra, numerous cases described under the latter heads were undoubtedly true cases of acromegaly.

One who has seen a well-marked case of this disease will never forget it. The subject is bulky and his appearance suggests physical inertia and mental hebetude; he is humpbacked, the movements are slow and cumbersome, and the expression of the face, which is enormously enlarged, is not suggestive of too much intelligence; the forehead is low and retreating, the nose of more than ample proportions, the lower lip thickened and everted, and the lower jaw elongated out of all proportion to the other features, producing a most remarkable physiognomy. The *tout ensemble* suggests a reversion toward the original type of being.

The disease, in the vast majority of instances, is one of adult life, being commonest between the fourth and fifth decades. Two recorded cases have been congenital and two have occurred between the ages of ten and twenty. It affects both sexes in about equal numbers, being slightly more prevalent in females. The onset is insidious and the course pre-eminently chronic. There is diminution of sexual desire which may even reach complete abolition, and in women the menopause is one of the earliest and most frequent symptoms. Cephalalgia, usually referable to the vertex or frontal region, and of ever varying intensity from a slight feeling of discomfort to the most agonizing pain, is a very constant symptom. Pain in the affected joints is also common. Vaso-motor disturbances causing local paleness and flushings, senations of numbness, formication and hyperesthesia of the affected parts are not uncommon. The reflexes are present. The mental faculties are ordinarily unimpaired, but loss of

memory and dullness of perception are not of infrequent occurrence. In some cases there is great somnolency. The enlargement affects alike the bones, the cartilages and the soft parts, and in each instance is a true hypertrophy. The skin is apt to be flabby and of a brownish olive color, particularly about the face. In some patients, together with the subcutaneous tissue it is greatly thickened over the affected parts. Hyperhidrosis, either local or general, is frequent. The hair is coarse and abundant, and is notably increased on the body and extremities.

Taking up *seriatim* the various regions of the body, we find that the bones of the cranium participate but slightly in the enlargement, but there is apt to be some thickening at the sutures, the ridges and protuberances or muscular attachments. The forehead is usually low and retreating, the superciliary ridges prominent from enlargement of the frontal sinuses, the eyebrows heavy. The eyes are prominent, due not only to an enlargement of the eyeballs but also to an abnormal deposition of bone in the orbits. The integument covering the palpebræ is deeply pigmented and their cartilages sometimes enlarged. Progressive loss of sight occurs in more than half the cases, which is due, according to Marie, to pressure upon the optic chiasm by the enlarged pituitary body. It would seem equally as probable that this condition might also be due to bony pressure upon the optic nerves where they emerge through the optic foramen.

The cheek bones are prominent, owing to a dilatation of the antrum of Highmore on either side. The nose is enlarged in all directions and may be prodigious. The upper lip may or may not be enlarged, but the lower lip is enormously thickened, everted and protuberant. The inferior maxilla is massive and while the rami may increase to such an extent as to force outward the lower part of the external ear (which appendage is also usually enlarged), the principal enlargement is in the body of this bone, the alveolar border and symphysis of which are very prominent. Prognathism is marked and is rarely ever absent. The increased growth of the alveolar border is not participated in by the teeth, and they are consequently widely separated and often fall out The angle of junction between the body and rami becomes obtuse as in old age. Owing to the extreme projection of the chin, the facial angle approaches that of the Simian family. The contour of the face is elliptical.

The thorax is greatly enlarged in its antero-posterior diameter and is flattened laterally. Cervico-dorsal kyphosis is rarely ever absent if the disease is sufficiently advanced, and there may be compensatory lordosis. Sometimes, though rarely, scoliosis is observed. Kyphosis is due to a thickening of the bodies of the vertebræ and of the intervertebral substance. The neck is short and thickened and the chin approximates the sternum. The extremities of the clavicles are enlarged. The ribs are wider, thicker and more oblique than normal, and their cartilages are enlarged and more or less ossified. The sternum is widened and thickened, and the xiphoid appendix is unusually prominent.

There is enlargement of the pelvic bones, especially at the pubic symphysis and at the crests of the ilii.

The arm bones are not affected, but the lower ends of the radius and ulna are enlarged. All of the bones and soft parts of the hands are increased in size, and the hypothenar eminence is unusually prominent.

The femur is enlarged at the condyles; the patella is also enlarged. The malleoli are generally increased in size together with all of the bones and soft parts of the foot. The great toe is especially prominent, and the os calcis is enlarged out of proportion to the other pedal bones, giving the heel a decidedly African appearance.

The muscles are generally flaccid, and a condition of progressive weakness is the rule, though in some cases there has been an increase of strength at the beginning. The tongue is uniformly enlarged and the soft palate and uvula may be. Articulation is laborious and the voice guttural. Polyphagia and polydipsia are usual. The bowels are ordinarily constipated. Diabetes and albuminuria are not infrequently associated with this disorder.

The pathology of this disease is not well understood. Marie says that the ganglia and the cord of the sympathetic are enlarged and thickened, and there is frequently enlargement of the hypophysis cerebri, but as the functions of this body

are yet unknown, we are still left in the dark.

It is only in the early stages of this disease that there can be much difficulty in its diagnosis, for, later, characteristic landmarks are so clear that literally "he who runs may read," Marie having diagnosed a case while walking on the streets of Paris. The affections with which it is most liable to be confused are gigantism, myxœdema, leontiasis ossea, the osteitis deformans of Paget, and elephantiasis. In gigantism the extremities are proportionate with the stature, the face is not elongated, prognathism does not exist, and the general symptoms of acromegaly are absent. In myxœdema the soft parts are alone affected and the face, according to Sir William Gull, is "like a full moon." In leontiasis ossea there are bony tumors of the face and cranium, but there is nothing unusual about the hands and feet. In the osteitis deformans of Paget, the cranial bones are enlarged, and if the facial bones are affected it is only in a slight degree; the face is triangular with the base upward, the long bones are principally affected and show a tendency toward abnormal curvatures. It usually occurs after the age of fifty. In acromegaly the facial bones are affected primarily, and if the cranial bones are involved it is to but a slight degree; the face is elliptical; the hands and feet are of unusual size, and the long bones scarcely at all affected. It usually occurs before the age of fifty. Elephantiasis is a disease of the skin and subcutaneous tissues; it seldom affects the face and upper extremities; it is frequently unilateral and the bones are never affected.

The duration of acromegaly is twenty to thirty years or longer, and if the patient is not carried off by some intercurrent affection, death is due to exhaustion.

The treatment should be directed toward the alleviation of the symptoms as they arise.

The foregoing article describes pretty accurately the very typical case which I had the pleasure of presenting to the society by the courtesy of my friend, Dr. J. A. Rice, of Merton, in whose practice it occurred.

The patient, Mrs. F., is an American woman of English parentage; fifty-one years of age; married and has had two children, the youngest of whom is nineteen. The family history is excellent, her father and mother both having attained an old age. She has had seven brothers and four sisters, all of whom, except two, are living and in good health. One sister died of consumption, and a brother of "dropsy." She always had a strong constitution, and up to the time of her last confinement had never been sick. This last labor was protracted and severe, and she dates her trouble from that time. Menstruation never returned, and it was not long before tachycardia, the enlarged thyroid, prominent eyeballs and other symptoms of exophthalmic goitre appeared. Dr. Rice tells me that at no examination during the last fifteen years has the pulse been less than 120 per minute. The enlargement of the hands, feet, nose and chin, began about ten years ago and has steadily increased. Headache has been a prominent symptom.

This case presents the usual well-marked characteristics of acromegaly. The ears, nose, lower lip, tongue, inferior maxilla, hands, feet, clavicles, ribs, sternum, patellæ, and pelvic bones are enlarged. There is prognathism to the extent of about one-half inch. The neck is short and thickened; the thyroid gland is enlarged and cartilaginous, the right side thereof being the larger of the two. There is pulsation in the veins of the neck; cervico-dorsal kyphosis is marked and increasing. Her former weight was 127 pounds; it is now 214. Her height is 5 feet, and the length of the foot (which ordinarily bears the relation to the height of one to six) is 11 inches, or one to five and one-half. There is impairment of sight, but the eyeballs are not as prominent as they were several years ago. The eyes are surrounded by a pigmented areola which varies in intensity. The mental faculties are little, if any, impaired, but the memory is poor. Polyphagia and polydipsia are present. There is hyperhidrosis. Saccharine urine and albuminuria have at times been observed, and there has been considerable edema of the feet at different times. The voice is masculine.

A comparison of a picture representing her present condition with a daguerreotype taken some twenty-five years ago, illustrates better than any description I can give the changes which this disease has wrought.

COMMUNICATIONS.

BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA.

E. G. MATSON, M.D., PITTSBURG, PA.

At the present time bacteriology offers practicable methods of diagnosis in three diseases, viz.: pulmonary tuberculosis, diphtheria and cholera. Apart from these the difficulty or duration of the methods, or the slight value of negative results, is a serious practical obstacle. In the case of tuberculosis the diagnosis may be made by any one with a suitable microscope on account of the striking color reaction. In the other two diseases mentioned more laboratory apparatus is required; and these organisms are not readily identified except by persons who have more skill and experience in such matters than will ever be possessed by the average physician. These conditions are met, so far as diphtheria is concerned, by what is generally known all over the world as the American or New York system, by which the health authorities furnish gratuitous bacteriological examination.

What is known as the diphtheria or Klebs-Lœffler bacillus was first described somewhat imperfectly by Klebs in 1883. In 1884 it was re-discovered by Lœffler, the essential results of whose work have remained unchanged by all subsequent investigation. Lœffler showed that it was a pathogenic microbe capable of producing death in animals by infection. On the other hand, he did not venture to consider it the specific cause of diphtheria, mainly because he did not succeed in finding it in all cases examined. On this account it attracted but little attention in the following four years. In 1888 Roux and Yersin made the all-important discovery that the Klebs-Lœffler bacillus, when grown in cultures outside of the body, is capable of producing a poisonous substance which is capable not only of killing animals in very small doses, but also produces paralysis in those which live long enough to acquire it. The complement of this discovery was Sidney Martin's announcement in 1892 of a similar toxic substance which was extracted from the membrane of actual cases.

Zarniko* said that in 1890 the Klebs-Lœffler bacillus had been found in two hundred and forty-nine cases and was absent but twice; while in nearly all cases it had been sought in vain in healthy people.

In 1890 Baginsky began to employ the bacterial diagnosis of diphtheria in the recently-opened pavilion for that disease in the Emperor and Empress Frederick Children's Hospital in Berlin. A similar course was adopted by Roux in Paris at the Enfants Malades. This system has been carried out more or less thoroughly in the hospitals abroad since the last mentioned date, and has also been made use of by private practitioners. Finally the provision made by great cities for the diagnosis of all cases within their limits has enormously extended the range of available experience.

It is evident from this historical sketch that our present knowledge of the Klebs-Lœffler bacillus rests on a very broad basis involving many thousand cases examined in several different years and places, and by many different observers.

That the Klebs-Lœffler bacillus is the specific agent of infection is not universally conceded. As far as known to the writer, the denials come mainly from those who are distinctively pathological anatomists, and who show a very evident disinclination to see the basis of the classification of disease change from the anatomy of the lesions, on which, by virtue of their labors, our present system rests. Indeed, one might say now that bacteriology has reached that material stage of success which is manifested by endowed and subventioned institutions and a hierarchy of teachers from Koch and Pasteur down to propagate it, that the pathological anatomists are rousing from their lethargy and preparing to make one last united charge before it becomes too late.

*Berl. Klin. Wochenschrift. 1892, p. 208.

When Koch laid down his first principle, that the specific ineffective agent must in all cases be found in the characteristic lesions of the disease, he evidently accepted the distinction of the pathological anatomists and clinicians as finalities—at least so far as transmissible diseases are concerned; for if more than one infecting agent can produce like lesions and symptoms; or, on the other hand, if the same infecting agent can produce lesions with different characters in different cases, Koch's first canon would be of slight value in establishing the relation of parasite to disease. It was a fortunate circumstance for bacteriology that the outlines of the various morbid entities were laid down with a great deal of correctness before its birth. Otherwise, to define a disease as the morbid process associated with a given micro-organism, and then to attribute the disease to that organism because it was always found associated with it, would have had very much the appearance of begging the question.

In the early part of this century diseases were simply congeries of symptoms. Dropsy, for example, was regarded as a disease in itself, and not a symptom—or, at least as a consequence of a disease having its actual seat in the heart of the kidney, and the like. The classification on a purely symptomatic basis was necessary at a time when pathological anatomy was unknown. Yet when the pathologists began to distinguish by the difference in the morbid anatomy, what had long been regarded as one disease, many clinicians still refused to accept the new classification. Thus a typhlitis and empyema were regarded as the same disease. Another example is typhus and typhoid fever. As late as 1850, a distinguished clinician of London gave it as his opinion that there was no valid distinction to be made between cases of low fever with intestinal ulceration and those without. The question at issue between the pathological anatomists and the bacteriologists is simply whether all persons having their tissues damaged by the invasion of the same specific infecting agent, no matter what form the damage may assume, are to be considered as having the same disease; or whether only those in which the damage assumes the same anatomical form?

There is but one decisive source of evidence to settle this question which is independent to bacteriological observation. This is the filiation of the successive cases in an epidemic. Epidemiology has shown us the distinctions which have a sound basis even where the morbid anatomy is not decisive. If we can be certain that a catarrhal pharyngitis has caused a diphtheritic angina, we are bound to assume that the two are of the same character, as we are bound to consider parents and their offspring of the same species. The history of epidemics makes the distinctions evident where clinical and anatomical evidence leaves us in the lurch. Thus when influenza is epidemic, who is a sufficiently skilled diagnostician to distinguish between these cases and those suffering from colds and the like? The same thing may be said of cholera nostras and even simple diarrhœa during epidemics of Asiatic cholera. The validity of the distinction between typhus and typhoid fever was largely made evident by the fact that typhus fever was not epidemic in all cities in which typhoid fever was epidemic. We are all familiar with the role played by American physicians who studied these diseases in both London and Paris as well as at home.

In the struggle the clinicians were so completely vanquished by the pathological anatomists that the former have busied themselves with discovering the clinical signs of diseases as classified by pathological research; and, as the result, we are now able to distinguish many forms of disease which were once confused. It is not unnatural, therefore, that the anatomists are disconcerted to find that their victory has only brought them new antagonists; nor is it remarkable that the struggle should be brought to a focus in diphtheria, in which a well marked pathological lesion, owing to its conspicious seat, is itself the most important clinical sign.

While the lesser lights are pugnacious, however, the master himself has very clearly recognized the weakness of a strictly anatomical classification.* Virchow has said plainly that "Etiological unity does not follow from correspondence of anatomical lesions." The same pathological process is found in other mucous membranes as in diphtheritic infection of the pharynx; thus in the rectum, in dysentery; on all

* Berl. Klin. w. 92 p. 281 ff. Berl. Med. Soc.

possible mucous membranes, in cholera, as in the pelvis of the kidney, and in the gall bladder. Pseudo-membranous destruction of the epithelium of the colon may be the result of corrosive sublimate poisoning as well as of dysentery. In each case the lesion is of the same anatomical character as in diphtheria of the air passages. "Now," says Virchow, "since we know that whatever may be the true cause of dysentery it is certain that it is not caused by corrosive sublimate, we are bound to recognize that identical lesions may be produced in the same organ by causes as distinct from each other as corrosive sublimate and the cause of dysentery."

None the less, pathological anatomy is always of importance. A diphtheritic inflammation everywhere means a necrosis of the mucosa to a greater or less depth, whether it be due to the infection of diphtheria, cholera or dysentery, or to poisoning by corrosive sublimate; and in consequence this form of inflammation is followed by an ulcerative process. Again, the locality is of consequence. Thus, as Virchow says, to say that the patient is suffering from corrosive sublimate poisoning is not the same as to say that he has a pseudo-membranous colitis, for he may be free of this and be suffering from a nephritis.

The fact that Klebs-Lœffler bacilli are not always to be found in the false membranes of the air passages does not in the least disprove the claim that it is the specific cause of those in which it is present. Those who attack it on this ground are unconsciously assuming as an axiom, that all diseases of the pharynx in which there is a necrosis of the mucosa with the formation of a false membrane are necessarily due to the same infection. We have just seen that this, so far from being a basis of argument, is a contestable hypothesis which ought first to be proved.

In laying down the principle that the suspected microbes must be constantly found at the site of at least the early lesions of the disease, and absent in normal conditions, it is not to be understood that the mere presence on the tissues and not in them is evidence that they are of innocent character. With due allowance for the incubation and convalescent stages, their presence without lesions shows of course that the same organs in different persons are not susceptible to attack by them. When Koch, after nearly a hundred post-mortems of fatal cholera cases, found that an organism new to him was in the van of all other's in the mucosa of the intestine, he naturally assumed that he had discovered the cause of this disease.

This brings us to the consideration of the fact that the Klebs-Lœffler bacillus is found in healthy throats. If persons not known to have been associated in any way with diphtheria cases are made the subjects of examination, the number in whom this organism is found is really very few. Thus in New York three hundred such examinations were made with only eight positive results, of whom two afterward developed diphtheria. Inasmuch as diseases are generally acquired in trivial acts which do not arrest the attention, and no one in a crowded city where the contagious disease is endemic can actually be certain that he has escaped all possibility of contagion mediate or immediate, these "diphtheria healthy" persons justify no further conclusion than that some persons are insusceptible to the germs.

On the other hand if children who are actually exposed are the subjects of examination, the bacillus is much more commonly present. It is quite probable that if the methods of examination were capable of demonstrating the presence of the germs when they were few in number, and the examinations were made daily, that the percentage in exposed persons who remain well, would be very large. The situation is the same in the case of cholera. Koch has pointed out that this fact does not disprove this specific character of the comma-bacillus because it is never found in healthy persons in regions from which cholera is certainly absent.

It will be of interest to consider whether in accordance with our epidemiological knowledge of diphtheria this fact is what must be expected of the infective agent or not. In the case of measles we do not assume that a child previously attacked, who escapes contagion in a household epidemic, has by chance not really been exposed like the others. On the contrary we say that he is immune to measles because we believe that he has been exposed. Yet no one has been exposed until he has actually received the morbid matter, whatever it may be, and no one can be said to be immune whose tissues have not proved

themselves actually hostile to the invasion by repelling an attack on their surfaces. No one would consider that a microbe was definitely proved not to be the cause of measles because it was found on the mucous surfaces of immune persons. On the other hand those who are most inclined to claim everything for predisposition to an infective disease, are at least inclined to take into account the degree of natural immunity that can actually be shown to exist by other than bacteriological methods.

In measles we find that the malady seizes on nearly every child within reach, and nearly at the same time, except of course those who are immune by virtue of a previous attack. At the close of the incubation period, after the first child has acquired the disease, it breaks out as an explosion among the others. These well-known facts show that there is neither a permanent nor temporary natural immunity to measles except in an exceedingly small fraction of the population. It is almost entirely a question of the transmission of the contagious matter, and very little a question of the condition of the tissues upon which it was received. The future discoverer of the specific germ of measles will be under the necessity of showing not only that the accused organism is present in those who suffer, but that it is all but absolutely absent in those who do not have and never have had measles.

If we compare diphtheria to measles, it is immediately evident that the conditions of conveying the disease directly, so far as mere transmission of the contagious substance is concerned, is nearly the same. The same excretions are contagious in each case, and the sick are of the same age with the same habits. Doubtless the duration of the danger is longer in diphtheria, while the transmission may be favored by the fact that cases of measles are less confined. Fluegge has recently published an account of the epidemic of diphtheria in Breslau in the five consecutive years ending in 1890. There were 6,349 cases reported. Yet the houses, and still more the families, in which there was more than a single case were exceptional. On the other hand, in the fifty houses where there were the greatest number of cases, with three exceptions, the cases were not simultaneous, but followed in a chain of single cases at intervals of a few weeks, exceptionally of six or seven months. The mode of spread was thus entirely different from that of measles, and this difference can only be accounted for on the supposition that temporary and permanent natural insusceptibility is very common in the case of diphtheria, and very uncommon in the case of measles.* How many persons are naturally insusceptible cannot be arrived at with exactness. In the five years studied by Fluegge the proportion attacked yearly is given in comparison with the population living at the same ages. After twenty similar years one-fifth of the population attaining the age to twenty would have had the disease. On the one hand diphtheria was more than usually prevalent during the period under consideration; on the other hand it cannot be assumed that all children were exposed.

Enough has been said to show that in diphtheria something more is evolved than contamination of the pharyngeal surfaces with the virus of diphtheria in the transmission of this disease, and that this something is a condition of the tissues which only exists simultaneously in a few persons, and probably never exists in some.

The facts of diphtheria epidemics are sufficient to show that we must expect to find at times the germ of the disease unassociated with lesions of any sort in persons who have been directly or indirectly exposed to the disease, but do not acquire it.

These questions have been gone into at some length in part because they deal with the objections which are commonly made against the dominant bacteriological theory of diphtheria, and still more because they bring out the difference which may be expected to exist between the bacteriological and clinical diagnosis of diphtheria. Those who call bacteriology to their aid must expect to find on the one hand that some of their white anginas—to use a Gallic expression—are not diphtheria; and again other cases in which a definite membrane does not exist in any stage of the disease, will be shown to be diphtheria, and however mild themselves, will endanger all around them. Even purely catarrhal pharyngitis will be found to be diphtheria, since we mean by this term, not a

*Fluegge, Ztsch. Hyg. Vol. I, 3, p. 401.

definite pathological process, but the whole series and variety of pathological changes which the Klebs-Lœffler bacillus can initiate in mucous membranes and elsewhere. According to Ritter, indeed, this bacillus always exists in Bretonneau diphtheria. In over three hundred cases examined by him the bacillus was found absent in so few that he prefers to believe that in these few cases the organism was really present, but was not found on account of some defect in the technique. Unfortunately, in the publications seen by the writer, Ritter does not define with exactness what he means by Bretonneau diphtheria. The work of other observers has shown very decisively that a distinct membrane frequently exists without the presence of the bacilli.

It may be asked, if the bacillus may be present or absent in cases which are clinically diphtheria, what is the importance of the examination. When the clinicians had to accept the distinctions of pathological anatomy and epidemiology, they naturally went to work to discover the clinical signs which corresponded to the various pathological conditions. Precisely the same work is now going forward in ascertaining the clinical facts which correspond to bacteriological distinctions. Much of this may be left unnoticed as too recent, but some of the results are well ascertained.

While there have always been found a considerable proportion of mild cases among those characterized by the Klebs-Lœffler bacillus, yet nearly all the fatal cases of pseudo-membranous disease of the pharynx contain it.

In 1892* Baginsky reported the results of the bacteriological diagnosis in 154 persons who had been sent to his hospital as cases of diphtheria. Of these, 118 showed the presence of the Klebs-Lœffler bacillus; in 36 it was absent. Of 118, 45 died, or 38.19 per cent. Of the 36 who lacked this microbe, 4 died, or 11 per cent. Of these four, however, one was brought to the hospital with severe diphtheritic paralysis and died in consequence. Another was complicated with severe measles, and died of an extensive pneumonia. The other two died of double empyema. The remaining thirty-four cases went on to recovery without any complication in a short time. A similar difference in the case of mortality has been noted by many subsequent observers.

Thus Chaillou and Martin,* in ninety-nine cases sent to the diphtheria wards of the Hospital des Enfants Malades, Paris, found twenty-nine free of the bacillus, none of whom died. In the remaining seventy there were twenty-eight deaths. In general it may be said that the white anginas, due to other causes, offer about the same danger to life as measles.

As a rule the course is shorter; and while the symptoms are sometimes threatening at first, there is usually a rapid improvement and the duration only occasionally reaches eight or ten days.

Martin and Chaillou attempt to discover what clinical distinctions vary with other pathogenic germs present, both when associated with the Klebs-Lœffler bacillus and when it is absent. They are in accord with nearly all who have studied the question in ascribing a particular severity to the class of cases in which streptococci are associated with Klebs-Lœffler bacilli.

Finally the ancient struggle over the distinction between croup and diphtheria deserves mention. The bacteriologists have shown that the same distinctions divide this disease as the anginas. In ninety-nine cases of croup studied by Martin and Chaillou, twenty-eight showed no membrane in the throat. Seven of these lacked the diphtheria bacillus. In twenty-one they were present. In the seven cases there was one death. In the twenty-one there were ten deaths. In addition there were seven cases with three deaths in which diphtheria bacilli were not discovered until after tracheotomy had been performed, and it was believed by the authors that this was the result of infection in the hospital wards. Finally it may be added that the Klebs-Lœffler bacillus was found in 80 per cent. of the cases diagnosed croup in New York.

Do Not Prescribe Alcohol.

Physicians, as an educated and enlightened body of men, should never recommend alcohol unless absolutely necessary. They should endeavor to imbue the masses of mankind with the thorough understanding of the mental havoc and physical destruction wrought by this terrible agent.

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* Berl. Klin. Wochensch., 1892, p. 184.

* Annals de l'Institut Pasteur, 1894, p. 450.

SHOULD THE CARDIOPATH MARRY?

W. T. ENGLISH, M.D., PITTSBURG, PA.

Intimately associated with the physiological and pathological phases of this inquiry are those of a sentimental and ethical nature. While a brief study of the phenomena attending gestation under physiological conditions of the circulatory apparatus, and a comparison with the pathological modifications in the cardiopath, will subserve the paramount object of this paper, some other considerations are inseparably connected with a discussion of the subject. To the noblest and best woman there is something inestimable and beyond comparison on earth to the full, wide, spiritual mission of motherhood. Marriage is the only plane in which she can expect to attain the goal of all that is worldly and unwordly, and where she may acquaint herself with the mighty mystery which is the portal of the race.

This innate desire for motherhood must not be thoughtlessly denied. Especially is it desirable that we consider well any proscription that may give excuse to those who shirk maternal obligations. Many a strong woman of to-day prefers to storm the hitherto man-garrisoned citadels, instead of entering the holy-of-holies of wholesome motherhood, for which nature has so loftily endowed her. Her dreams of home are yielding to lucid and verbose novels descriptive of neurotic frenzies and masculine decadence. Even her pen touches the pages with theoretic knowledge of heredity, pathology and diseased babies. But while the avenues of commercial and literary competition are choking, the holy realm of childbirth is left to those who are not always physically competent.

From whatsoever reason women miss their obvious destiny they are, from Nature's point of view, failures. No single life can be a perfect life. On the other hand no greater selfishness can be imagined than that which brings children into the world doomed to death, or to a life of immitigable misery. Each child has a right to know the life into which he is to be born. No human should have his pre-natal interests so far forgotten in this 19th century that we shall be forced to fight a losing battle against disease and death. Morbid courtships and hectic marriages belong to the time that is past. Physical considerations must, then, have somewhat to do with marriages and child-bearing. The social plane in which the prospective progenitor moves may have an important bearing, and even sentiment be of utility, when we attempt to answer the query: "Should the cardiopath marry?"

Every physician knows the intimate association the womanly functions have with the circulatory apparatus, and the direct influence upon the heart demeanor of the disturbance of the menstrual flow. On the very threshold of conception there are evidences of perturbation as exemplified in palpitation, irregular rhythm of the heart, and respiratory limitations. As each month wheels its round, we watch with interest the increasing stress under which the heart labors, that it may hide its expenditure of energy on behalf of the developing fœtus from the various organs which have hitherto had sole claim upon its efficiency. Now it conceals unrest by an appeal to the vaso-motor center in the medulla, and anon it quiets a threatened tumult by recourse to its accelerator or inhibitory connections with the vagus and sympathetic supplies; holding in reserve for a more final appeal, its own ideo-motor capacities, controlled by intrinsic plexuses and ganglia. Meanwhile some rebellious organ, as the stomach, adds to the difficulties by mechanical, physiological or pathological mal-behavior. Even while these efforts are expended to control violations of cardiac calm, there is developing in the uterus, and its expanding vessels, an ever-widening circulatory area, over which the belabored heart must propel the blood; and, in consequence of the augmented volume of the circulating fluid, it is required to pump more blood in a given time. The task increases as gestation progresses, not only because of the additional labor, but also on account of the

perverted and weakened quality of the blood. The response to the demand for enlarged propulsive power is an hypertrophy of the left ventricle. The auditory evidences of these changes in the organ and the blood, are in the increased heart-sounds and murmurs at the cardiac base. Plethora exists as to quantity and anæmia as to quality. Pregnancy thus inaugurates heart injury that ultimates in degenerative changes which may continue to a fatal termination.

In the circulation of the pregnant woman there is need for extensive resiliency, and nature grants a capacity for tolerance of gastric caprice, renal aberrations, blood changes, respiratory embarrassment, neurosal deviations and varied psychoses. In the presence of the morbid heart, any one of these manifestations is liable to pass beyond the line of the physiological. Dangerous symptoms are extremely apt to arise when there is such a wide range in the vascular tonicity as is present where the heart is incapable or sluggish from disease. A fair adjustment may be achieved throughout all the details only to finally fail at the puerperium. For when the zenith point in the pregnancy and the circulatory distension is arrived at, the heart and womb must expel their contents or serious dangers will uprise. This depletion is sudden and effectual; but, nevertheless, it must also be succeeded by the lochial drain, continued in gradual manner for weeks. The danger is imminent when there is pronounced interruption; and, if there is impairment of any portion of the circulatory mechanism, it will most likely prove fatal.

Nature enters her protest against all the acts associated with pregnancy when attempted in the presence of cardiac disability. The excitement incident upon coitus is in itself a trial to which the heart has succumbed when in all the ecstasy of sexual embrace. Notwithstanding that age, temperament and disposition has each made its special co-efficient of force, which may enter into the estimate for good or ill, the fact has been demonstrated that the heart has yielded regardless of each and every one when under the thralldom of sexual orgasm. Sterile cardiopaths cannot be considered safely marriageable. The Malthusian practices, which are so common in France and have been suggested as a means of comparative protection to the cardiopath, are never safe in any respect. Moreover, any marriage which would thus tend to increase the number of Malthusian men, women and children in the world is a trespass upon the moral domain for social ends.

A rational conclusion from the facts already rehearsed would be, that the cardiopath would be greatly influenced by her sphere in life and social plane. A perfect estimate of the consequences would at least include a brief reference to those conditions for good and ill that constitute her environments. It is generally observed that those high in the social plane are not likely to precipitate themselves into the difficulties of marriage without deliberate thought. This gives opportunity to develop and detect impediment. A more general and probable access to the advice of a physician protects still further. Marriage is therefore less common among cardiopaths in the higher social planes. If marriage and pregnancy do occur, rest and ease are the daily portion of the woman. The surveillance of a physician is provided, and his advice carefully followed, often with the aid of efficient attendants. Pregnancies are rarely repeated.

Upon the other hand, there is poverty of blood vouchsafed to her who never experienced, and therefore cannot be expected to appreciate cleanliness, and for the same cause may not be emulous of bright surroundings. Food, air, and temperature are elements which exert potency that is of vast importance in cardiopathic gestation. Constant and exacting drudgery and toil are bad medicines for the injured heart. Upon the submerged class worry lays an awful hand, and among these, the calamitous sequlæ to emotional causes attain their zenith point. Urban life pre-supposes a denial of some of the advantages accorded to those in suburban or country districts. There is a sentimental shadow that steals over the heart burdened by pregnancy and disease that is unmeasured by those who feel only that which is real. It means poverty of home, poverty of blood, poverty of life, plus the anæmia and distress of pregnancy. To those low in the scale, the boundaries of difficulty geometrically expand. Their surroundings conspire to make greatest caution of paramount importance, and at the same time limit the possibility of its achievement.

Mortality statistics are not extensive, but the death rate to the cardiopath during gestation, and at puerperium, proves to be very high. Porak, of Paris, in 1880, reported 92 cases, with a death rate of 38.09 per cent.; Reny, of Nancy, 1880, 38.8 per cent. Wessner, 77 cases by him collected, 37 per cent. died; Schlayer reports 25 with 10 deaths; Leyden, 20 with 11 deaths. Sears collected 30 cases in Boston last year with 10 deaths. These are the number of women, not their pregnancies, and are of cases where severe conditions arose.

Among the few experiences which have fallen to my lot in my earlier practices in this city, I recall one who has passed through repeated pregnancies with a grave mitral lesion; and it is the mitral lesion that is most commonly found in fatal cases. The aortic is rarely present as a very dangerous complication. This is partly due to the general distribution of cardiac murmurs—those of the mitral being more common before middle life, and these of the aortic valves more frequent in later years.

If the cardiopath miscarry, which her heart lesion will probably guarantee, the history will be darkened with extreme danger. The necessity for abortion appears when there are grave symptoms in the early months. When necessary, it should be performed early. If the case is desperate, abortion may, in itself, add to the peril. Charpentier gives it as his experience and observation that among cardiopaths abortions are very common, and premature labor frequent, and children delivered at term do not have tenacity for life. Casanova states that in more than half the cases, with marked symptoms, pregnancy never reaches a conclusion. Duroziez noted forty-one cases, with twenty-one miscarriages—five deliveries at six months. Of the thirty-seven children born alive only two lived to be five years old.

McDonald claims that the hopefulness of the pregnancy is increased if the stage of compensation is attained before conception; because, if the physiological hypertrophy and the uterine enlargement are combined, they include the possibilities of faulty heart nutrition. Degeneration usually begins about the fourth month. The heart has but little potency remaining if it occurs prior to that time. The degeneration and downward course for the woman is almost sure to follow delivery, and is usually speedy. A degree of conservatism has hitherto prevailed among medical men who have answered the question proposed in this paper. This is because some serious cases have succeeded in achieving a safe delievery; and the fact that the mother has merely escaped with her life is considered by some sufficient to commend matrimony.

Jaccound rather encourages the cardiopath to marry, and assumes that lesion of moderate extent, might be consistent with a comparatively wholesome motherhood. If under thirty years of age, he assumes it should be encouraged. Sentimental and moral considerations are suggested as loudly demanding matrimony for the cardiopath.

There are sects and sticklers for creeds who regard those who oppose marriage for any cause as little better than atheistic. Standing upon their self-erected higher ethical plane, they ignore the physical plea that assumes it is always the greatest good of the largest number to have a small death rate.

On the other hand, Peter insists that, under no circumstances should the cardiopath marry. To our own mind this seems the more logical conclusion. When we carefully review the fatal possibilities linked inseparably with cardiopathic gestation, it seems too full of alarm to be dismissed without a most decisive denial. The woman who dares to plunge into such a fatal tide of probabilities can be compared to one who, infatuated by an access of fear while viewing a dizzy height, plunges into the awful chasm which excites her awe. The end does not appear in their selfish self sacrifice, but they vouchsafe to the fruit of their wombs a legacy of death, and place a stumbling-block in the line of march of humanity toward perfection.

Every thought in the mind of the physician and economist should be directed toward the physical improvement of progeny. It is ours to teach the better doctrine and contemplate the loftiest and most inspiring spectacle of "federation of the world" on this point toward which medicine is surely feeling its way. Each new stride achieved and every old barrier to their consummation beaten down is a strong reason for optimism. However distant the achievement, is is much that it has become the object of effort, not with the few, but with the many.

THREE CASES OF DIPHTHERIA TREATED WITH ANTITOXIN.

W. T. BURLEIGH, M.D., PITTSBURG, PA.

CASE 1. Pearl Hall, aged nine years. I was unable to obtain any antitoxin with which to treat this case until the fifth day of the disease, (Feb. 28). At that time, just before the injection, the temperature was 100° F., the pulse 120. This was in the evening. The next morning after the injection the temperature was normal and the pulse 96. There had been a reduction of the pulse beats from 120 to 96 in twelve hours, and the little girl's mother informed me that she had slept better that night than she had at any time previously, during her illness having complained of a great deal of pain through her head and entire body.

The morning following this, that is thirty-six hours after the injection, and the seventh day of the disease, the temperature was normal, the pulse 84, and the membrane had entirely disappeared.

The patient was discharged the thirteenth day of the disease, and eight days after the injection. The membrane had been confined to both tonsils.

CASE 2. Birdie Armstrong, aged one and a half years, was injected on the evening of the fifth day of the disease, at which time the membrane covered both tonsils, the temperature was 102 2-5° F., and the pulse was 120. The next morning the membrane was still present but in a pultaceous condition; the pulse was still 120, but the temperature was normal. The next morning, or thirty-six hours after the injection, the membrane had entirely disappeared. The patient was discharged on the eighth day of the sickness, or three days after the injection.

CASE 3. On the eleventh day of this month I was called in the evening to see Harry Peterman, aged nine years. He had been ill about twenty-four hours, and was in a profound comatose condition. Membrane covered both tonsils, the pulse was 144 per minute, and the temperature was 103 1-5° F. Twelve hours after the injection, the membrane was apparently unaffected, but the pulse was only 124 per minute, and the temperature was 100 2-5° F.

The next morning the patient was with difficulty kept in bed, the membrane was partially dissolved, the pulse 108, and the temperature 99° F. The next morning, or thirty-six hours after the injection, the membrane had entirely disappeared.

In this case no medication was used, not even a placebo, until the third day, when one-quarter grain doses of calomel were given every two hours to move the bowels. This case was apparently a very malignant one, and would have probably died under any of the former methods of treatment. The parents had lost children before from diphtheria, and had abandoned all hope of saving this one.

The two cases first narrated were treated the first five days with the usual local and constitutional remedies, and these were continued in a desultory way after the use of the antitoxin. These first two cases would probably have recovered anyway, but I believe the length of illness was much shorter, the patients more comfortable and the recovery more certain.

In these three cases, and in one complicated with scarlet fever which I saw in consultation with Dr. Sweeney, there was no paralysis following, and I believe that we can prevent the nervous sequelæ in every case, where we see the case within the first twenty-four hours, and use a strong enough dose.

In the case of Harry Peterman, I was enabled to try the protective influence of antitoxin. A sister's child, a little boy two years old, was there on a visit, and on account of the other children at home they were afraid to take him there, and it was neceesary to keep him in the same room day and night with the diphtheria patient. I gave him an injection of Behring antitoxin 600 units strong, and he did not contract the disease. The same preparation of 1,000 units strength was used for curative effects on the other cases mentioned, and the syringe I am using is a Fisher syringe with asbestos expanding piston, of 15 c.c. capacity. There was no reaction, local or general, following the injections.

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SATURDAY, APRIL 27, 1895.

EDITORIAL.

AUSCULTATORY PERCUSSION.

It is a noteworthy fact, explicable only on the theory that the human intellect, like a lost traveler, wanders in circles without making much advancement, that the article on Auscultatory Percussion which appears in our present issue, should ever have been offered or accepted as a prize essay.

In 1840, Camman, with the assistance of Clark, published an elucidation of this method of physical diagnosis, which he had recently discovered. Yet the value of his discovery has not been generally recognized by the profession, so that, as the writer of the paper states, any one attempting to investigate the method at present, must be self-taught and his work must be essentially of an original nature, although he can learn from medical literature that there is such an art as auscultatory percussion and can gain a general conception of what he may expect from it.

From one point of view, it is to be regretted that so much of Dr. Benedict's article deals with the stomach and liver. However, it would be manifestly unfair to offer adverse criticism on a necessary consequence of limitation of practice. It seems to us that the careful study of the lung and thoracic cavity, and of the enlarged pelvic organs, by the aid of auscultatory percussion, may develop important diagnostic powers.

Writers agree that the special monaural stethoscope of cedar used by Camman, is unnecessary. This very point, trivial as it may seem, will doubtless determine the adoption of the method by many physicians who would not incur the trouble or expense of buying a separate instrument. A shrewd lecturer once said, that inconvenience had killed more people than incapacity, and it is often enough that the balance of choice between two lines of treatment is swung by some petty consideration which might be offset by five or ten cents. The fact that an assistant is unnecessary—there being no pleximeter finger in use—will also tend to popularize the method.

It is altogether likely that many physicians will take up the method of auscultatory percussion, only to abandon it after a few weeks' trial as of no more service than more familiar methods of physical examination. We would remind any such that no valuable art is mastered in a day; and that if half the claims made for auscultatory percussion are true, it is well worth six months' study. The substitution of friction, the vibrations of a tuning-fork and of an electric interruptor for percussion with the finger, like the automatic tappers invented by other investigators, is ingenious, but, we venture to predict, not destined to take the place of the simpler method. It is matter of common observation that the best surgeons use the scalpel, forceps, scissors and chisel almost to the exclusion of elaborate destructive instruments that have been devised, and the common officinal remedies and simple means of examination are the mainstay of the best medical clinicians.

ABSTRACTS.

COMMUNICATION OF TYPHOID FEVER.

At the last annual meeting of the British Medical Association, Dr. P. W. Williams, Senior Assistant Physician, Bristol Royal Infirmary, reported five cases of typhoid fever as tending to prove that this disease may be be communicated by the breath or expectoration of infected persons. Three of the cases were brothers, and the fourth a nurse who had been nursing the first case. The first, fourth and fifth cases died, and in two of these the post-mortem examination revealed all the typical lesions of typhoid fever, also ulceration of the larynx. As it is practically impossible for any case of enteric fever to be communicated by fæcal contamination in the Bristol Royal Infirmary, by reason of the elaborate and careful precautions taken, and as the first case was delirous and was coughing and expectorating in all directions, it is concluded that in this way the nurse in attendance contracted the disease. The fever in these cases was of peculiarly virulent type. All three in the Infirmary began with very severe headache and bachache, profound nervous prostration supervened very early, and all three died apparently from respiratory failure. In two at least there were laryngeal ulcers, and probably also in the third, the nurse. In one there was purulent discharge from the ear, and in another an abscess formed in the arm. Cultures in agar from the spleen and larynx of the fifth case gave identical micro-organisms corresponding in every respect with the Eberth-Gaffky bacillus of enteric fever. These cases would seem to explain the possibility of typhoid fever being infectious, as maintained by Budd and endorsed by Collie; and emphasize the necessity for more careful prophylaxis in cases which exhibit laryngeal complications. The practical importance of bearing in mind the possibility of typhoid fever communication by the expectoration cannot be over estimated. The true nature of laryngeal ulcers in typhoid fever is still an open question, authorities differing as to whether they are simple catarrhal ulcerations following the somewhat common complications of this disease, catarrhal pharyngitis and laryngitis—or specific ulcers analogous to the ulcers in the intestines. Osler states that he believes that the bacilli have not yet been found in the ulcers, and Fagge, Murchison, Roberts, Libermeister, Strümpell and Bartholow are cited by Lincoln as of opinion that the ulcers are always secondary and not specific lesions of the typhoid process. On the other hand, Klebs, Rokitansky, Landgraf, and Morell Mackenzie are among those who take the view that they are due to a specific deposit upon the laryngeal mucous membrane.—*Pacific Med. Jour.*

DEGENERACY IN LITERATURE.

The Boston *Medical and Surgical Journal* says editorially:

"The recent epidemic of Yellow Books, Green Carnations and New Women in England has led Mr. Charles Dudley Warner to descant, in his own charming way, upon the "yellows" in literature, and to recommend scientists, alienists, and psychological investigators to study it, believing that it signifies disease A study of the sort was made some years ago, before the works above mentioned appeared, by Max Nordau, whose work* an English translation of which has just appeared, has naturally given rise to much criticism.

Nordau was well equipped for the task. In the first place he had been a literary critic for many years, and was thoroughly familiar with modern literature; and, in the second place, he was a disciple of Lombroso, to whom he dedicates his book, and, although not a physician, he had studied neurology and psychiatry very thoroughly, and he was familiar with the morbid mental phenomena of hysteria, insanity, degeneracy and crime. With such a mental equipment, then, which few mere critics could possess, he gives himself to the investigation of certain modern tendencies in art and literature, and to a careful diagnosis of the mental condition of some of the writers who are looked upon by many as leaders in modern thought. As a result he finds that these tendencies have their sources in the degeneracy of their authors, and that the enthusiasm of their admirers is for manifestations of more or less pronounced moral insanity, imbecility and dementia.

Such a study has a special interest for the physician. It might seem at first that the interest would be pathological rather than therapeutic, for it is hard to believe that Mr. Aubrey Beardsley or Mme. Sarah Grand, for instance, would wish to be cured of the morbid manifestations which are their chief title to fame. Nevertheless, if books or works of art inculcate absurd and anti-social doctrines, they exert a disturbing and corrupting influence on the minds of many people, especially the weak-minded and hysterical, and those who adopt every new doctrine which they think is fashionable. We have seen within a few months how much mischief a degenerate labor agitator can do if chance puts him into a position of power. The neurotic are often rendered much more unstable and sometimes actually insane by dwelling too much upon the teachings of the degenerate, whether it be in the field of anarchy, socialism, theosophy, Christian science, or spiritualism. It therefore becomes the duty of the physician, as a matter of public mental health, clearly to recognize the mental stigmata of degeneracy, and to point out to the public the true nature of such conditions and the leading facts in mental therapeutics. Unhealthy books may do as much harm to the mind as certain disease germs do to the body, and it is not against the so-called pornographic writers alone that the public should be warned. The physician too often gives precise directions about the preparation and ingestion of food for the body, while he too seldom considers what food is offered to his patient's mind, and yet a course of Ibsen or Tolstoi or Maeterlinck may do as much harm to some persons as devilled kidneys, Welch rarebits, or mince pie. Only by a careful study of the mental stigmata of degeneracy can the physician prescribe what Nordau calls the effective treatment of the disease of the age: "Characterization of the leading degenerates as mentally diseased; unmasking and stigmatizing of their imitators as enemies to society; cautioning the public against the lies of these parasites."

The physical stigmata of degeneracy have been fully enumerated by Morel, Lombroso, and others, and they are beginning to be mentioned in the modern treatises on nervous diseases. Nordau enters into an elaborate study of the mental stigmata, which are also well recognized by alienists and neurologists. The sensory apparatus of the degenerate may either be so irritable that a slight stimulus will give rise to a very marked response, as when a color, or a bar of music, or an ordinary verse of poetry fills him with a strange thrill or shudder; or it may be so sluggish as to be aroused only by the hor-

*Max Nordau, Entartung, Berlin, 1893; Degeneration, New York, 1895.

rible or the disgusting. In the one case he may be proud of his excitability, and consider it proof of deep appreciation; in the other he may, with equal pride, consider himself above the ordinary prejudices of humanity. With it all he is selfish, conceited, and extremely emotional. A sensation ordinarily excites many different cells in the cortex, giving rise to many associated ideas, but the healthy mind disregards the unimportant ideas thus aroused and concentrates its attention only on those which are essential. The degenerate is weak of will and incapable of fixed and prolonged attention; the unimportant ideas thus called into activity are not ignored, but fill his mind with a jumble of vague and obscure notions, which suggest strange relations. A word may thus call up other words of similar sound but with no related significance, and we have the phenomena known as echolalia. With vague and obscure ideas and unusual associations, the degenerate is incapable of clear thought and often becomes a mystic, finding hidden significances and inexplicable relation in all things. In other cases, with a prevalence of insistent ideas, his own personality becomes the dominant factor in his world. In cases where the sensory apparatus requires powerful stimuli, or where sexual or other animal instincts give rise to insistent ideas, he may show evidences of sexual perversion or denounce the ordinary laws of decency and custom, and be classed as an anarchist. In other cases he may be filled with vague and impractical ideas for the regeneration of society, and preach social reform. In most cases, unhappily for society, he has a morbid desire either to talk or write, and indulges that desire constantly.

Having thus set forth the leading mental characteristics of degeneracy, which, it is needless to say, are in the main accepted, Nordau carefully studies the works of various writers and brings forward the evidence that they are degenerate. Rossetti, Swinburne, Paul Verlaine, Mallarmé, Tolstoi, Wagner, Péladan, Maeterlinck, Walt Whitman, Baudelaire, the French symbolists and décadents, Oscar Wilde, Ibsen, Zola, Nietzche, and many others; all are weighed in the balance and pronounced degenerate. In many cases there can be no question as to the justice of his criticism; apart from their writings the known facts in the lives of such men as Poe, Verlaine, Maupassant, Nietzche, and Tolstoi prove his assertions. In the main, too, although his criticism is savage, and his pleading at times special, the facts which he adduces more than substantiate his assertions.

It cannot be denied that in some cases the degenerate may possess great abilities in some directions; but he will be, as Lowell said of Poe, "three-fifths of him genius and two-fifths sheer fudge." He lacks harmony and balance; his mental development is unequal, and his influence does not advance the world, but it is always unhealthy; like Carlyle, "he leads men into the wilderness—and leaves them there."

It is the tendency of the degenerate to associate with his kind, the criminal in the Mafia, the mystic in a religion, the esthete in a cult. Around those groups cluster many neurotic persons, who suffer from "the restless seeking of the modern soul for a new ideal," who are also incapable of clear thought, and who call that deep which is only obscure, incomprehensible and absurd. When the sect is once formed, many others join simply to keep in the fashion or to seem "advanced," and with them come the social strugglers who are always eager to win money or notoriety by adopting every new fashion. Degeneracy is not necessarily, as Nordau thinks, a disease of our age, but its stigmata may be found throughout literature, in the mysticisms of the Neo-Platonists, the sentimentalism of Rousseau, or the indecencies of the Marquis de Sade. It is, however, to-day, with the dearth of great writers, much more in evidence, and it becomes the physician's duty to show that these idols of the present are false gods.

Toxic Effects of Thyroid Feeding.

Beclere presented to the Medical Society of the Hopitals, Paris, a patient illustrating the cure of myxœdema by thyroid therapy. During the course of her treatment she accidentally took a large quantity of tyroid gland—92 grains in eleven days. At the end of this time she had developed such symptoms as tachycardia, pyrexia, insomnia, tremor of the extremities, exophthalmia, polyuria, albuminuria and glycosuria; in fact, a complete picture of Basedow's disease. The writer, therefore, concludes that the latter disease is due to a hypersecretion of the thyroid gland, which may be caused in more ways than one.

SOCIETY REPORTS.

ALLEGHENY COUNTY MEDICAL SOCIETY.

March, 19 1895.

Dr. W. T. English opened the discussion of the subject announced for the evening, entitled:

SHOULD THE CARDIOPATH MARRY?

(See page 599).

DISCUSSION.

Dr. W. D. KEARNS: This is certainly a subject which deserves a good deal of reflection, and upon which there is quite a diversity of views. The views of the reader of the paper are certainly orthodox. How to reach these cases before the harm is done is a difficult question. Many young women are undoubtedly suffering from cardiac lesion, who do not consult a physician. I think the gravest reason why the cardiopath should not marry, is on account of her offspring. And then again, we cannot foretell the results of a slight cardiac lesion or what will occur in the course of time. Hypertrophy of the left ventricle is only the first stage, and the disease may never go beyond this stage. Hypertrophy of right auricle and ventricle is the second stage, with many evils attendant upon it. But, gentlemen, is this stage always reached? If we are to prohibit such young women from marrying, may not the same or worse results occur from other causes; for instance, cycling?

A slight muscular overstrain, in a person suffering from a slight cardiac lesion, may bring on hypertrophy of the right auricle and ventricle. But to return to the original discussion, should a woman get married who has a cardiac lesion? I trow not. But has not the husband, or rather the man, just as sharp a line of duty to follow? I think this should be just as binding on the man as on the woman. God gave no man a right to make a woman miserable or to destroy her happiness. If we are to make a rule for the survival of the fittest, we must exclude the man just as much as the woman. Take the subject of tuberculosis—pulmonary tuberculosis, and in thirty years of obstetrical practice I have studied the effects of this disease upon the uterine impregnation. And I feel more and more every day that the marital exclusion of persons having a tubercular taint should be more prominently brought forward and applied to both sexes—to the man as well to the woman. On the point of the cardiac lesion, I do not take quite as extreme a view as the reader of the paper, but I believe if he errs at all, he errs on the right side.

DR. J. M. BATTEN: It is a fact that some families "breed down" physically and become extinct, and that other families "breed up;" and this is, I believe, due, to a certain extent, to improper selection. I do not think it is the duty of any man to select a woman who is diseased in any way; but after a man has selected a partner who has a slight heart affection, I cannot see any reason why it would not be proper for the woman to bear children. I would consider this question affirmatively because, in the majority of these instances, the child will take the constitution of the father. We have no proof that heart disease is hereditary. I have attended some cases of mothers who had heart disease, who bore exceedingly healthy children—nothing the matter with the heart at all. I suppose the reason for this was the children took the constitution of the father. In one case of confinement which I attended the mother had heart disease, and during the course of the pregnancy see had several attacks of hemoptysis, and that lady is still living. I might mention also a case which came under my notice, of a man who had heart disease, and who died in the act of copulation.

DR. ADOLPH KŒNIG: Considering the fallibility of our judgment in matters of this kind, it seems to me that we take considerable responsibility on our shoulders when we declare to a young woman or a young man that they must break off some engagement into which they have

entered, and live a life of celibacy. When we remember that many cases of heart disease will go to old age without serious difficulty arising, it seems to me we are not justified in saying to any human being, "You must not marry;" especially when we know that in many cases of heart disease a married life is not more dangerous than a life of celibacy. I remember Prof. Flint's advice regarding prognosis in cases of heart disease. He always took a middle ground. He said that the safest course was to tell the persons that they were far from being well or in perfect health, and that they must guard carefully against excesses of any kind, or in any direction, and if this care was observed they might live out the ordinary term of life. I think all of us may have seen cases of such individuals, in whom life was prolonged, even beyond the limit accorded to more robust persons, simply because they knew they must guard against excess of all kinds. Many of these cases alos pass a more healthful and happy life on account of this constant care exercised to avoid excess or exposure. I recall to mind a case on which I was called upon to pass judgment, some ten years ago, of a young woman who had valvular heart disease. I did not feel justified in telling that young woman that she must give up all hope of a happy married life. She married, and I must say that subsequent events proved that I would have done her a great injustice if I had denied her her present happiness. Of course, many cases may end disastrously, but they might have ended just as disastrously without the marriage relation.

Dr. Theodore Diller: The late Sir Matthew Arnold had valvular heart disease and was told so by his physician, Sir Andrew Clark, more than twenty-five years before his death, and yet it is a fact that he did nearly all the best work of his life with the full knowledge that he was suffering from this organic cardiac leison. I have often talked with older practitioners on this subject, in which I have always been interested, and have been told of many cases of persons who have gone through life with heart murmurs without the lesion affecting their daily work to any appreciable extent. I have myself followed some cases for eight or ten years, and must say that my own ideas are very much at variance with the teachings of most of the medical schools of ten years ago. To my mind it does not mean very much of itself to say that a woman has a heart murmur; it may or may not be a serious matter. Life insurance companies are beginning to realize that a heart murmur is not necessarily a menace to life, and some of them will insure cases of this kind. I think that the prognosis in the majority of these cases has been entirely too gloomy.

Dr. John Milton Duff: I do not want to enter into an exhaustive discussion of this question, but I would like to bring forward one or two points in connection with it. Theoretically I agree with the paper of Dr. English. It might be even said that if the sole object of life was to improve our race, we should prohibit the marriage of all persons who are not in perfect health. I do not think, however, that a woman with a slight heart lesion undergoes any more danger during pregnancy and child-birth, than does a woman suffering from many other lesions. But we are not to consider that all heart lesions are hereditary, and that is one point in which the doctor should have made a distinction. If I produce disease of my heart by excitement, by calisthenics, or by overlifting, a consequent hypertrophy of the left ventricle and the succeeding conditions following in the right and left auricle, I am simply suffering at that time from a traumatic condition, and it would be almost as logical to say that I should not then marry because of the evil effects upon my progeny as it would be to assert that I should remain single because I had lost a limb. I admit that as far as my personal experience goes it has not been very extensive, but I can recall but few cases in which I feel confident that pregnancy did really impair the condition of the heart. We all know that during pregnancy there is a dilatation of the heart, and that this dilatation is accompanied by temporary hypertrophy. Now if there is a hypertrophied condition of the muscles of the heart before pregnancy, this hypertrophy will naturally be increased somewhat during pregnancy, and there will be a change in the structure of the fibers of the muscles of the heart, just as there is in the uterus. After delivery there is a retraction and contraction and there will be an absorption, and all this

may bring about an ultimate condition in which the pathological symptoms all disappear. This may be theoretical, but in two cases of my own the resulting conditions seemed to verify it, and the subsequent health of these cases justifies me in calling your attention to pregnancy as a possible cure of cardiopathy. I was very much interested in the excellent paper.

DR. W. C. SHAW: I wish to state that I have had some personal experience with cardiopathic marriage.

Some time after I had become exgaged to the lady who afterward became my wife, I discovered to my utter amazement that she had valvular disease of the heart, and about as bad a case as you will ordinarily meet. The question which now confronted me was what my duty was under the circumstances. As I had not discovered this lesion before becoming engaged to her, I married her, and although the cardiac lesion was the direct cause of her death, complicated by pregnancy, yet she raised three children, two of whom are yet living; however, I think a man with his eyes open, and a medical man at that, should think very seriously before entering into the marriage relation with a cardiopath. Was it an exception that death occurred at the fourth pregnancy instead of at the first? I was only permitted to live with her a little short of ten years, wanting eight days only.

I consider the question of cardiopath marrying a very serious one. The woman is in danger from disease and death, and the husband is in danger of losing his wife.

DR. BATTEN: Are your children now living healthy?

DR. W. C. SHAW: Yes, sir.

DR. W. T. ENGLISH: Mr. President and Gentlemen—It seems to me that the discussion of this paper has taken a very different phase from the paper itself. The principal point which I desired to make and emphasize was that a cardiopathic *woman* should not marry, and the fact that I omitted from the discussion the masculine gender is a tacit admission that they are not to be considered.

Please rehearse the points made: In the first place we have a woman with heart disease jeopardizing her life, and shortening her days, and it seems irrational to say that such a woman could become pregnant with safety to herself. I think it would be very wrong for her to ever marry, because marriage would necessarily bring about pregnancy; and the evil consequences would be multiplied againt her. She would voluntarily increase her own danger; but the danger does not stop here. It continues on to the fœtus. I think the statistics in my paper prove this latter point conclusively. Pregnancies rarely go to term, but patients generally abort either from accident or necessity. At times it becomes the duty of the physician to produce an abortion and thereby relieve the immediate conditions. When they go to term, then what? All the statistics which I have been able to gather go to show that the offspring of the cardiopath rarely live five years. I think it most irrational to assume that the cardiopathic woman should marry under such circumstances. With regard to themselves and with regard to their progeny, the physician's advice should always be against marriage. So far as the men are concerned, I leave them out of the question.

I desire to take exception to the statement of Dr. Diller that insurance companies would insure persons having cardiac lesion. No regular insurance company would accept such a risk. The companies which will take such an applicant are classed as extra hazardous, and they charge the entire premium on the payment plan against the policy, allowing that premium to be deducted by the annual payment, requiring some twenty years to pay off the claim. In reality there is a lien against the policy for the entire premium, figured at the annual rate which obtains at the age the policy is secured. If death occurs the first year, the entire amount of the premium is deducted from the face value of the policy.

Acute Tonsillitis.

Salicilate of soda is recommended as little less than a specific in acute tonsillitis. It should be given as early in the attack as possible, and in sufficient doses to cause ringing in the ears. Fifteen grains every three hours will usually cause this effect, when the dose may be diminished to ten, and then to five grains at the same intervals. It should be continued a day or two after disappearance of the fever.—*Medical Summary.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M D.

MEDICINE.

Treatment of Renal Colic.

In persons who are subject to the uric acid diathesis, attacks of renal colic are of not infrequent occurrence, and they are commonly attended with such agonizing pains as to leave the sufferer in a prostrate condition for a considerable time after their disappearance.

Although during the attacks little can be done except by the administration of morphia, chloroform, phenacetine and other analgesics, to relieve the pains and render the patient more comfortable, much can be done in the interval to prevent the occurrence of the trouble.

Observations during the past few years have shown that piperazine, in connection with copious draughts of water, is capable of rendering decided benefit in this class of cases.

Although its physiological action is not as yet perfectly understood, piperazine is acknowledged to be the most effective solvent thus far brought forward for uric acid. It keeps the uric acid in the blood in a soluble condition, preventing its deposition in the various tissues, the kidneys, joints, etc., and also dissolves uratic concretions that have existed for some time in these localities.

A considerable number of cases of renal lithiasis have been reported in which the administration of piperazine has been followed by an abundant discharge of gravel in the urine, relief of the pains in the region of the kidneys, and of the hematuria, if present. Its prolonged use in these cases has also insured the patient against a recurrence of the attacks of renal colic, and thus greatly aided in their restoration to health.

Piperazine-Bayer should be administered, as already stated, in a liberal quantity of water, and, in view of the chronic nature of this affection, it must sometimes be employed for a considerable time.

Acute Diseases of Childhood.

In the treatment of the acute affections of childhood, the physician is often confronted with the problem of how to reduce high temperature rapidly and effectively and without injury or discomfort to the patient.

Among all the remedies hitherto proposed, phenacetine still maintains its position as the most eligible antipyretic in pediatric practice. Its popularity is based upon its possession of marked sedative and anodyne properties, aside from its power of reducing fever. Under its influence the restlessness disappears, pain, if present, is relieved, and the child often drops into a refreshing sleep.

In an interesting article in the *Archives of Pediatrics*, March, 1895, Dr. C. G. Jennings states that among the coal tar antipyretics, "Phenacetine has given by far the most satisfactory results. Clinicians generally agree that powerful effects like cyanosis and dangerous cardiac depression never occur with this drug with a reasonable dosage. The beginning dose of phenacetine should never be larger than one half grain for each year of age. This dose may be repeated every hour for two or three doses. Guided by the thermometer or the relief of the distress and the breaking out of a gentle perspiration, the administration of the drug can be arrested when the result is accomplished."

In the treatment of acute nasal and pharyngeal catarrh, tonsilitis, laryngitis, bronchitis, pneumonia and pleurisy in the first stage, the author advises the combination with aconite of one, two or three doses of phenacetine at hourly intervals, at the height of the pyrexia. After the period of engorgement in pneumonia and any grave inflammatory disease, however, the aconite should have no place in its therapeutics, and antipyresis should be accomplished by the bath or phenacetine, administered with very great care.

In the pyrexia resulting from the absorption of ptomaines, and the acute indigestion of childhood, phenacetine, in Dr. Jennings's opinion, is *par excellence* the remedy. It can be administered with calomel, bismuth or salol to suit the necessity of the case.

He also states that in the acute inflammation of the cerebral and spinal meninges, tubercular meningitis, and leptomeningitis, and cerebro-spinal meningitus, phenacetine will be the antipyretic to administer, as it promptly relieves the agonizing headache and neuralgic pains and induces quiet and refreshing sleep. He has found this remedy very serviceable in the exanthematous fevers. In measles the high fevers attending the onset and acme of the eruption stage can be well and safely controlled by phenacetine, while in scarlatina, of a mild and moderately severe type, the administration of one or two doses, when the pyrexia becomes uncomfortable, is good treatment. The same experience was obtained in the treatment of variola. Finally, in malarial fevers and in typhoid fever of a mild type, phenacetine, in the author's opinion, has best answered the purpose of an antipyretic.

A New Method of Narcosis.

At a meeting of the Berlin Medical Society, Dr. P. Rosenberg described a new method of combined anæsthesia which he trusted would entirely prevent the lethal action of the chloroform on the heart. He has demonstrated by experiments on animals that cardiac syncope during chloroform narcosis is due to reflex irritation originating in the nasal mucous membrane and transmitted to nerves having a paralyzant action upon the heart and respiration. By anæsthetizing the

mucous membrane of the nose with a spray of cocaine these reflex disturbances are prevented, and, in view of the fact that cocaine is an antidote to chloroform, its absorption will in another way obviate the injurious effects of the latter. If the nose is previously cocainized, anæsthesia is more readily induced, is attended with less disturbances, and especially is free from after effects. The patients wake up rapidly, and experience none of the usual discomforts.

Amylene Hydrate.

Harmack and Meyer (*Zeitschr. f. Klin. Med.*) have arrived at the following results after careful investigation of the physiological properties possessed by amylene hydrate. Like alcohol, it first excites and then successively paralyzes all the nerve-centres. In graminivorous animals quiet sleep is produced, whereas in carnivora the symptoms of excitement and intoxication are more pronounced. The fatal doses were found to be 15 to 30 grains per kilogramme weight of animal. A very marked diminution of temperature is produced, intensifying the danger to life. Muscular spasms produced by poisons, such as santonin and picrotoxin, are delayed or alleviated. The excretion of urea is diminished, and, finally, it cannot be employed subcutaneously, owing to the severe pain produced.

Duboisin as an Hypnotic.

P. S. Skuridin (*Vratch*) used hypodermic injections of duboisin in twenty one cases of sleeplessness in the insane, the dose varying from $\frac{1}{150}$ to $\frac{1}{75}$ grain, and the grand total of injections amounting to three hundred and sixty. In one hundred and fifty-three (forty-two per cent.) cases the duration of induced sleep exceeded six hours, while in one hundred and twenty-six (thirty-five per cent.) it oscillated between four and six hours, and in sixty-two (eighteen per cent.) was under four hours. In nineteen (five per cent.) the drug failed altogether. The writer comes to the following conclusions:

1. Duboisin will occupy a prominent place among hypnotics for the insane.
2. The best results may be expected in epilepsy, periodical insanity, and acute mania and mental confusion.
3. The hypnotic effect is a secondary phenomenon, developing consecutively to the subsidence of a motor or muscular excitement; hence the drug proves most useful in insomnia caused by intense motor excitation. In sleeplessness depending upon illusions, hallucinations, or organic brain disease, but unaccompanied by distinct motor disturbances, the remedy remains inefficacious.
4. The drug is free from accessory ill effects.

Potassium Permanganate.

In the Canadian *Practitioner*, Chambers concludes a paper detailing some experiments on this subject as follows:

1. Potassium permanganate in dilute solution, not stronger than one grain to an ounce, may be given by the stomach without danger.
2. Potassium permanganate, subcutaneously, is poisonous.
3. Potassium permanganate, grain for grain, completely decomposes morphine, the decomposition occurring in acid media more rapidly than in a neutral medium.
4. Food-stuffs and acetic acid do not interfere with the decomposition.
5. Potassium permanganate is an efficient antidote if taken while the morphine is in the stomach.

The question still remains as to whether potassium permanganate is of therapeutic use after the morphine is absorbed into the system. It has been proved conclusively that if morphine is introduced subcutaneously into the system, it is excreted into the stomach. Now, the morphine passes from the blood into the stomach by osmosis and by excretion, and, by the principle of osmosis, more morphine will be excreted if it is decomposed as soon as it passes into the stomach. Reasoning on this principle, we would expect that repeated small doses of potassium permanganate by the stomach would be of use in cases where the morphine has been absorbed into the system. This is rendered more probable by the fact that morphine, as a rule, is a slow acting poison.

Diet in Gout.

A. Bogdanoff has studied in Professor Obolenski's clinic the influence of animal, mixed and vegetable diet in four patients, three of whom suffered from gout and the fourth from round ulcer of the stomach. The latter patient was given only milk as a food. The mixed diet was found to cause the greatest daily excretion of urine and of uric acid. The specific gravity was between that of the urine in vegetable and that in animal diet. The body-weight increased most under the influence of vegetable diet, diminished under mixed diet and fell greatly under meat diet. In the fourth patient, although the daily quantity of urine was as great, with a slightly acid reaction, the quantity of uric acid was small. The author concludes from these experiments that the diet of gouty persons should not be heavy, but nourishing, and tending to increase the number of white blood corpuscles. For this purpose mixed diet answers best. Pure meat diet acts badly from a psychical standpoint, frequently causing a great antipathy to meat, a tendency to eat little and to drink less, and in this manner diminishing the quantity of urine considerably. Constipation is also often observed.

Common Diseases Mistaken or Mistreated.

The author, James F. Goodheart, spoke of scurvy as being a very common disease in children, and although such cases are often enough recognized, they are constantly allowed to go unrecognized, and pass as rickets, or rheumatism, or injury, or temper, or "pure cussedness" and so on. He thought the cause was usually due to keeping a child

too long on condensed milk or feeding too liberally upon one or other of the infant foods. Condensed milk is an excellent food for infants upon proper occasion, but its constant use should not be continued too long. However, scurvy will sometimes appear with any of the foods, even the best of them. The remedy is pure milk, raw meat juice, good vegetable broths and orange juice as regards foods, and absolute rest in bed with a little opium, if necessary, for the pain. They generally recover speedily but not always. It has twice happened to him that after giving a very hopeful outlook, the child has died suddenly the next day In neither case did the child look worse than many another who did perfectly well. Therefore, until the child has taken to its change of diet and begun to mend, it is as well to speak guardedly.—*Lancet.*

Follicular Tonsillitis.

A paper by Dr. Norris Wolfenden on "The Nature of So-called Follicular Tonsillitis and its Relation to Infectious Disorders," describes recent progress in the study of this disease, with special reference to its bacteriology. The author believes that the time is not far distant when we shall classify the inflammatory condition of the tonsils and throat upon a bacteriological and not a clinical basis. He describes briefly four varieties, omitting all cases in which the bacillus of diphtheria plays a part, under the head of staphylococcal, streptococcal, pneumococcal, and Roux and Yersin coccal angina. In all of these forms there may be throat symptoms which resemble diphtheria. "Follicular" tonsillitis is not really follicular at all; it is an acute cryptic infection due to one of these forms of cocci. Its contagiousness appears established in some cases, but is generally not very easily traced. It never appears to attack large masses of people simultaneously, although a number of persons living under the same roof or in the same conditions are frequently affected at the same time, suggesting unsanitary surroundings as a common cause. The pathological enlargements of the tonsils, in which a chronic process of catarrh is present in the crypts, form not only the best culture media for a large number of micro organisms but give their products an opportunity to invade the system. Clinical appearances alone often allow so little ground for diagnosis of simple tonsillitis from diphtheria that in the absence of bacteriological diagnosis it is wise to isolate such patients from the first

The Treatment of Appendicitis.

Concerning the medical treatment little need be said. Locally, cold alone is appropriate in the beginning, and if slow in development, heat may be of utility in hastening the process. This was exhibited in the second case, seen four days after its inception and operated on on the tenth day.

Internally, opium is by far the most appropriate in all cases where it agrees, and no fears of "masking the symptoms," as some surgeons put it, should be entertained This drug gives physiological rest; and, more than that, it controls the inflammatory process, actually diminishing the calibre of the arterioles of the mesentery and peritoneum better than any other drug yet used.

If the colon be filled with fæcal matter, a mild saline, just sufficient to remove this cause of embarrassment, is appropriate, and for the purpose no prescription is superior to the one used in the writer's cases—namely, fifteen grains of sulphate of magnesium in a half ounce of peppermint water every hour until the desired result is obtained. This mixture is well borne by the stomach and is efficient after a few doses. The diminution of the abdominal contents from the emptying of the gut of fæcal matter and of gas was most marked in the cases where it had been used, and at the time of the operation the freedom from interference of inflated intestines much facilitated the operation.

If general peritonitis develop, possibly the saline treatment alone is more scientific; but this is not settled. In such an event the author has never seen a case which recovered from either medical or surgical treatment, however skillfully it may have been applied.

Salol is of great value, as in so many intestinal diseases, by its efficiency in controlling fermentative processes in the intestinal canal.

The diet should be entirely restricted to fluids; and, so long as vomiting continues, nothing but barley-water or oatmeal-water or ice-water should be permitted. With the amelioration of the primary symptoms diluted milk, with a tablespoonful of lime-water to each glass, may be allowed.

These cases teach that an early diagnosis, the timely association of a surgeon in the management of the case, and the harmonious working together of the physician and surgeon will save many valuable lives that otherwise might be lost to the world.—Heffron, *Medical Record.*

Serum From the Donkey in the Treatment of Tuberculosis.

From a series of observations, Viquerat (*La Medecine Moderne*), affirms that injections of tuberculin in the donkey causes no other effect than an extraordinary increase of the appetite. The serum obtained from this animal, subjected to the intravenous injections of tubercle-bacilli, has been tried by the author first in tuberculous animals and afterward on phthical human beings. The subject was presented by Viquerat in a communication to the Societe Medicale de la Suisse Romande recently. Out of twenty-five cases treated with this serum, one cure and one amelioration were obtained. He presented two cases actually cured, but one was that of a girl suffering from cold abscesses and a cutaneous tuberculosis of the hand. The amount of the serum injected in these cases is not stated, but the author intimates that from 200 to 300 grammes might be a good quantity. The matter, though not received with enthusiasm, was extensively discussed; but, as a whole, the society preferred to assume a conservative attitude.

Bicycle Riding for Women.

"At the meeting of the Societie de Medecine Publique, Mme. Gaches-Sarrante read a paper on the utility of the bicycle for women. For the last three years she has been practicing this masculine exercise to the great benefit of her health. Alluding to the costume to be adopted, she insisted on the fatigue produced by the corset; the least up-hill provokes oppression from the stricture of the thorax. As regards the genital organs, all acute inflammation should forbid the use of the machine; but when the lesions were chronic, moderate exercise might be permitted and even enjoined. In any case, riding is much less fatiguing than standing or walking. Salpingitis, or chronic salpingo-ovariatitis, do not constitute a counter-indication, and in cases of chronic peri-uterine inflammation the bicyclette can replace with advantage the Swedish method of massage.

"Bicycling exercises, consequently, a healthy influence on the physical nature of women; they sleep better, digest better, their chest expands so as to find it necessary after a short time to enlarge the corsage of their robes. Mme. Sarrante concluded by drawing a vivid picture of the moral role of the bicyclette, the only physical exercise that husband and wife can take together."

Late Hereditary Syphilis.

Dr. Foster does not believe in what is often called late hereditary syphilis. He believes that in every case of inherited syphilis there are some symptoms during the first years of life, and in the vast majority of cases nearly 90 per cent. before the third month. These symptoms are frequently very mild and frequently escape observation, and the disease may then remain quiet until about the age of puberty. The lesions most commonly met with are of the skin, the eyes and the bones. —*Northw. Lancet.*

The Treatment of Jaundice.

Dr. M. Alivia, of Viterbo, read a paper before the International Congress on this subject, which concludes as follows:

1. Long-continued biliary stasis, comprising the secreting cells of the parenchyma of the liver and producing a certain anemia of the organ, markedly reduces and sometimes suppresses, the secretion of the biliary acids. The gravity of the phenomena described under the name of biliary intoxication does not, therefore, depend upon the action of these acids.
2. The scarcity or absence of bile in the intestinal canal modifies very seriously the chemical processes there taking place.
3. One of the most common of the gastric changes in icterus is the suppression of hydrochloric acid secretion.
4. There is little or no loss of carbonate of sodium in these cases.
5. The reaction of the contents of the stomach is usually alkaline, less often neutral or faintly acid.
6. The physiological activity of the bile and of the pancreatic juice of the intestine is retarded.
7. The chlorides in the urine are increased, the reaction of the fluid is often alkaline, there is diminution of urea with an abundance of products of the aromatic series.
8. The more marked are these characters so much the more grave are the disease and its clinical manifestations.
9. Alkaline treatment does not modify these conditions. The effect of the acid treatment is, however, to diminish the chlorides, to restore the normal acidity of urinary reaction, to increase the excretion of urea, and to reduce that of the aromatic products; at the same time there is a progressive increase in the weight of the body.

Ocular Headaches.

Dr. F. D. Green (*The Refractionist*) concludes an article on headache as follows:

1. Many cases of headache are due to ametropia.
2. Many cases are due to heterophoria.
3. Never pronounce a case as due to ocular strain until the nose is examined.
4. Inquire into the condition of the stomach.
5. In females inquire concerning the condition of the genitals and whether there is constipation.
6. Migrane may be due to ametropia or heterophoria, but frequently is not.

On the Value of Solanum Carolinense in the Treatment of Epilepsy.

In the presence of so chronic and incurable a malady as epilepsy, the introduction into medicine of any remedy which will diminish the number or the severity of the attacks in a certain number of cases is an improvement in our therapeutic measures which is not to be overlooked, and in solanum carolinense we believe such a remedy exists.

While we have not as yet administered it to a large enough number of patients to speak positively as to its therapeutic powers, in the few to whom we have given it it has given promise, which is, to say the least, encouraging.

Our attention has also been called to this subject by an article by Dr. Maxwell, of Indianapolis, in the *Indiana Medical Journal* in which he concludes that solanum carolinense materially controls epileptic seizures and is worthy of considerable confidence. Several of the observers quoted by Dr. Maxwell employed what is known as the succus solanum, but the preparation which we always used was the fluid extract made by Parke, Davis & Co., giving 10 to 15 drops of the drug three times a day after meals.

A Report of Cases of Chronic Heart Disease.

In the New York *Medical Journal*, Dr. R. H. Babcock, in reporting the results from employment of the Schott method of baths and gymnastics in diseases of the heart, says that the baths owe their efficiency chiefly to

free carbonic acids and the two salts of calcium and sodium chloride, while next in importance is the temperature, for as warm baths are debilitating and decidedly weaken the heart, even in health, they should in the beginning be from 92° to 93° F., and 87°, or a little lower, toward the close of the course of treatment.

The duration of each bath should be carefully limited, but may cautiously be prolonged with the progress of treatment and improvement of conditions.

One bath is given daily, but should be omitted every fourth day; the initial time is from five to eight minutes, to gradually reach a duration of twenty minutes.

A thorough course of treatment should extend through six or seven weeks, and after a rest of one month may be again continued if such be required.

The result of such treatment seems to lessen rapidity and increase the force of the heart's contractions, thus occasioning better filling of the great arterial system, with corresponding depletion of the engorged veins.

The gymnastics, which slow the rate and increase the force and volume of the pulse, should consist in flexion, extension and rotation of the extremities and trunk, but the attendant should carefully observe that the movements are made slowly and steadily, with occasional intervals of repose.

After referring to a number of cases successfully treated by this method, he concludes by saying that in those of aneurism, advanced anterio-sclerosis, acute softening or great fatty degeneration and degenerative changes of the blood vessels and myocardium, it is contra-indicated.

Value of Opium in the Laryngeal Stenosis of Children.

Dr. Carl Stern (*Ther. Monat.*) recalls the well-known fact that the difficulty in breathing in stenosis of the larynx in children is greatly aggravated by sleeplessness and fright. For this reason he has been led to treat these cases with opium, and his results have been so gratifying that he believes the remedy should receive more extensive employment. He uses it in cases—whether in diphtheria or without existing throat affection—in which the hoarseness, the barking cough, the stridor, the cyanosis, and finally the sucking in of the xiphoid process and lacteral portions of the thorax point unmistakably to stenosis of the larynx. He reports several cases in which the use of opium averted an apparently necessary tracheotomy. Stern gives from two to five drops of the tincture of opium, according to the age of the child and the intensity of the symptoms, the dose being renewed according to the result obtained.

The Best Treatment in Heart Disease.

Robert H. Babcock, of Chicago, Ill. (*The Journal of the American Medical Association*), concludes an able paper on the above subject as follows:

1. The position taken by Fraentzel, that rest is injurious in the treatment of all forms of heart disease is untenable, and the reasons he assigns are incorrect. Prolonged rest is detrimental, undoubtedly, in cases of enlargement of the heart without valvular disease, partly if secondary to arterio-sclerosis, and in cases of fatty or other degeneration of the cardiac muscles.

2. The cause, however, lies in the circulation outside of the heart and not, as stated by Fraentzel, in the liability of cardiac, like striped voluntary muscle, to degenerate as a result of prolonged inaction, since the heart muscle can not during life be subjected to complete repose.

3. When compensation has become destroyed in valvular lesions of the heart, particularly mitral stenosis and aortic incompetence, rest is indicated theoretically and is beneficial in practice.

4. Bradycardia would theoretically contra-indicate prolonged rest.

5. On the other hand, it is called for in paroxysmal tachycardia, but should not be maintained, after having shown its powerlessness to affect the heart rate.

6. Acute inflammatory or degenerative affections of the heart indicate rigid rest in the recumbent position.

Bicycling for Women.

The much-discussed question as to whether bicycling is *per se* an exercise suited to women is, perhaps, now of minor importance, since it has become fashionable, and will, consequently, be adopted by the gentler sex, without much regard as to its immediate or remote effects Its popularity is, however, a very satisfactory proof as to its capacity as a giver of health and pleasure, since it is not conceivable that the bicycle could ever have won its way, as did the corset, for instance, as a fancied adjuvant to physical charms. The late Dr. William Goodell, wise in an unusually wide experience, gave the exercise his unqualified endorsement, and from the almost entire absence of adverse criticism, it is apparent that the majority of gynæcologists are of the same mind. The whole question is an exceedingly simple one, and has been summed up by Dickinson (*American Journal of Obstetrics*), who concludes a very clear and complete paper upon this subject as follows:

Under proper conditions of costume and posture, with care that the exercise be gradually increased and properly graded for the individual case, and where there is no acute inflammation to contraindicate it, bicycling will probably show itself capable of large results as an agent in curing pelvic disorders, since it is one of the few exercises which attract women.

In view of women's disabilities and the disadvantages under which she has suffered in attempts to obtain interesting and beneficial muscular exercise, it seems hardly too much to say that the promise from the bicycle is far-reaching. Through it and the habits it will engender we look for better dress, freer dress, shorter dress in bad weather; for better exercise, for out-of-door activity, for steadier nerves, stronger muscles, painless periods, easy labors.

SURGERY.

Inhaling Chloroform.

Dr. A. Guerin, of Paris, (*Lancet*) says that death from chloroform may be avoided if inhaled exclusively through the mouth. When death occurs from stoppage of the heart, the cardiac muscular fibers cease to contract under the influence of a reflex action exerted by the nasal nerves on the pneumogastric, stimulating the inhibitory power of the latter on the heart. He further shows that when a rabbit is subjected to tracheotomy and then made to inhale chloroform directly through the trachea the drug has no effect whatever on the heart. On the contrary, when the chloroform is held before the nose of the rabbit, the heart immediately stops. The trachea being cut transversely, it is obvious that the chloroform inhaled by the nostrils cannot reach the heart through the bronchi. Dr. Guerin therefore assumes that the anesthetic agent exerts its injurious action on the movements of the heart through the intervention of the nasal nerves and the cardiac branches of the pneumogastric, the former acting reflexly on the latter. Dr. Guerin therefore advises that the nose of the patient should be held by the fingers until general anesthesia is produced, when there can no longer be any reflex action of the nasal mucous membrane anesthetized like the rest of the body.

The Danger of Apoplexy in Elderly Persons During Narcosis.

Senger, (*Deut. Med. Woch.*,) calls attention to the danger during the narcosis of elderly persons, and cites a case of a person of fifty-six suffering from sarcoma of the breast, but with healthy kidneys and heart, pulse normal but with sclerosed arteries. There was no undue excitement and but slight vomiting. Suddenly the face became deadly pale—the eyes fixed and expressionless, the pupils dilated and reactionless, the respiration shallow and gasping, the pulse could not be felt. The patient was finally restored by artificial respiration, heat, friction, etc., when it was found that had a partial hemiplegia of the right side. Two years later the patient had not fully recovered. The author believes this danger greater with ether than with chloroform, as arterial pressure is greater and longer sustained in ether narcosis, and hence he advises chloroform as the anesthetic of preference with elderly persons. Poffert reports a case of death after anesthesia in a previously healthy man of forty-six. The duration of the anesthesia was one-half hour and the amount of ether employed four and a half ounces. The ether was administered by Zerny's and lastly by Julliard's masks. The pulse was slow and regular, the breathing deep and rhythmical. Vomiting of mucus occurred during anesthesia and mucus rales were present at the end of the narcosis. The patient recovered consciousness quickly and there were no respiratory symptoms present for the first hour of the anesthesia. Then suddenly the breathing became difficult, loud, bubbling rales were heard and the patient coughed up a large amount of thick mucus. The pulse remained normal, the patient was perfectly conscious and it was thought to be only an excess of salivary secretion. The patient became worse despite the injection of camphor, the heart's action became feeble, he became cyanotic and died with symptoms of pulmonary œdema two and a half hours after the end of the anesthesia. The post mortem made the same day showed enormous œdema of the lower lobes of the lungs, which the author characterizes as post ether narcotic œdema of the lungs. Death during anesthesia is less frequent with ether than with chloroform, but the late deaths are more frequent with ether. The statistics collected up to the present time (*i. e.*, Guilt's) have not established the claimed superiority of ether over chloroform.

Cancer of the Breast—Operative Procedure and Statistics.

Halsted, of Baltimore, lays down this rule: "The pectoralis major, entire or all except its clavicular portion, should be excised in every case of cancer of the breast, because the operator is enabled thereby to remove in one piece all the suspected tissues.

The suspected tissues should be removed in one piece (1) least the wound become infected by the division of tissues invaded by the disease, and of lymphatic vessels containing cancer cells, and (2) because shreds or pieces of cancerous tissue might readily be overlooked in a piecemeal extirpation.

". . . Now . . . we regularly clean out the infraclavicular, and usually the supraclavicular region, and remove a part at least of the pectoralis major."

He calls attention to the hopeless attitude assumed to the disease by members of the profession who had been accustomed to the old procedure, in which the breast only was removed. "The younger Gross did not save one case in his first hundred. Dr. Hayes Agnew stated in a lecture shortly before his death that he operated on breast-cancer solely for the moral effect on patients."

"Encouraged by rare but positive cures, German surgeons, led by Volkmann, have for many years been earnestly at work on this problem."

Taking Volkmann's standard of three years' immunity as the guage of radical extirpation, the best results are as follows: Bergmann, 30.2 per cent.; Billroth, 4.7 per cent.; Fischer, 9.0 per cent.; Gussenbaur, 16.7 per cent; Konig, 22.5 per cent; Kuster, 21.5 per cent.; Lucke, 16.2 per cent.; Volkmann, 14.0 per cent.

Of 50 cases operated on by Halsted after the manner set forth—

In 5 details are not obtainable.

In 3 only has there been local recurrence, that is in the scar, apparent or buried.

In 8 there has been regionary recurrence (skin or supraclavicular glands).

In 34 there has been no recurrence, local or regionary, these dating from 2½ years to two months, so that he is not yet in a position to compare his statistics with those already quoted.

No patient out of 50 died of the operation.

Ureterotomy.

Dr. Kelley (Johns Hopkins *Hospital Bulletin*) refers to three cases in which he resorted to this novel operation for the purpose of ascertaining the permeability of the ureter. The operations were for myoma uteri, carcinoma uteri and dense pelvic inflammatory disease. After the completion of the operations there was a fear that the ureter had been included in the ligature, as in each instance it appeared to be enlarged. To release a large number of ligatures and expose the patient to the risk of hemorrhage, or to perform catheterization of the ureter would have been impracticable. He therefore located the ureter at the pelvic brim, snipped the peritoneum over its course, and made a longitudinal incision one-half cm. in length into the lumen, through which he passed a small ureteral sound into the bladder.

In two cases the ureters were found so be free, the enlargement being due to the pressure of the pelvic mass previous to the operation. In the third case the ureter had been encluded *en masse* with a large area of bleeding tissue in the pelvic floor. After the removal of the ligature the sound passed easily into the bladder. By this simple operation much time was saved and all three cases had uninterrupted recoveries. For closing the slit in the ureter he used the delicate mattress suture in two cases. Third required four sutures on account ot the persistent oozing of the urine. These sutures are very lightly passed into the outer coat of the ureter, not entering its lumen.

Retro-Displacement of the Uterus.

Malpositions of the uterus are difficult to treat and require skill and patience. Dr. Alfred C. Carpenter, in speaking of retro-displacements of that organ in the *American Journal of Obstetrics*, advises never to attempt to replace a retro-displaced uterus with the patient on the back.

If the pessary fails, the operation of hysterorrhaphy may yield good results. Another method if that of shortening the round ligaments. A third method is called by Dr. A. P. Dudley of New York, desmopycnosis. The objects attained by this operation are three-fold:

1. It shortens the round ligaments without sacrificing any of them, sufficiently to hold the uterus in a position anterior to the perpendicular line of the body, by simply changing their point of uterine attachment and including with them the anterior fold of the broad ligament, across which the round ligament passes to reach the inguinal canal.

2. Denuding and firmly fastening the round ligaments to the anterior surface of the uterus thickens and gives extra support to the latter.

3. By this procedure you succeed in maintaining the uterus in a normal position without fastening any portion of it to the anterior abdominal wall.

Dudley claims the following advantages for this method over either hysterorrhaphy of the Alexander operation.

1. It corrects the displacement by utilizing the natural supports of the uterus without sacrificing any of them.

2. The proper diaphragmatic action of the pelvic floor is not interfered with.

3. The bladder is not imprisoned in the least and its proper action is undisturbed.

4. There is no chance for intestinal adhesions about the line of sutures, for the latter lie in apposition to the posterior surface of the bladder, and adhesions taking place at this point simply elongate the utero-vesical junction.

5. In case of impregnation the uterus is free to rise in the abdominal cavity.

6. The use of catgut as a suture material in the operation does away with the danger of the formation of sinues by the ligature.

Fibroids and Conception; Pregnancy and Labor.

Dr. Hofmeier (*Zeitschr. f. Geburtsc. u. Gynak*) in a very complete and well-tabulated essay denies that fibroid disease of the uterus has any direct influence in causing sterility. Statistics do not show that, as has been alleged, subserous myoma predisposes considerably to sterility, whilst polypi and myoma of the cervix have little influence in that direction; nor can it be shown that fibroids promote sterility. These tumors seldom begin to appear till late in sexual life, so that if the patient is barren or a multipara the causes of her sterility or fecundity must have influenced her long before the development of her fibroid. The alleged frequency of this disease in elderly virgins is based on a fallacy. It is the local affectation which the most readily drives a spinster to the gynecologist, whilst middle-aged married women trouble less about small and slow-growing abdominal swellings. Women with fibroids who marry late in sexual life are fairly fertile, though Hofmeier can hardly make out cause and effect in this fact. Fibroids by no means strongly predispose to abortion. It seems that this accident happens only when the uterine cavity is rendered unfit to bear through the size and relations of the tumor; nor does fibroid greatly interfere with the uterine contractions during labor. The best time for hysterectomy is not immediately after delivery, but a few weeks or months later.

NEWS AND MISCELLANY.

The Buffalo Medical Journal

Will be fifty years old in a few weeks. The editors propose to signalize its semi-centennial anniversary by increasing its reading pages from 64 to 80, and by making other improvements that will contribute to its efficiency and keep it abreast of the professional progress of the period.

There are very few medical journals in this country that have reached the age of fifty years, and THE REPORTER extends its heartiest congratulations and cordial good will to a contemporary which after fifty years has not passed the prime of life, but with renewed spirit promises to be still young when it rounds out its century.

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ORIGINAL ARTICLES.

DIPHTHERIA AND ITS TREATMENT.

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My ear is pained, my heart is sick with each day's report of the fatality of this disease. Two, three, four, five children lost in a single family. Last week five were carried away from one home. How unspeakably sad to loving parents.

In conversation with medical men, and from the writings on this subject which appear in medical journals, I believe that very few physicians have any principles of treatment, but proceed to treat the disease by means of small or large doses of medicine, said by some author to be "good for diphtheria." Some new coal-tar product, perhaps, with a reputation of only a month or two; spts. nitre to cause perspiration; or a quarter or half grain of calomel given every hour, which some one has told them he believes the best, most efficient, constitutional remedy that can be used. In a day or two, as he has no principles of treatment and his patient grows worse, the physician becomes confused, looks through this and that medical journal, finds some remedy recommended as being very "good in diphtheria," and tries that. As the case rushes on, despite his efforts, he falls back for comfort on the fact—as he deems it—"that a certain number of cases will die, in spite of the best treatment." After this conclusion, he merely tries this or that medicine, which some one has recommended, "to see what it will do," though he himself has had no experience with it.

There are a few things indispensable for the treatment of any disease: (1) to discover what is the matter—in other words to diagnose correctly; (2) to establish true principles of treatment; (3) to seek for and apply the measures in accordance with these principles of treatment.

Within the past few years, a physician writing on pneumonia gave a most accurate description of the condition of the system in the various stages of the affection, after which he announced his principle of treatment, viz.: "The pulse must be kept below eighty beats per minute." That was all he aimed at. To do that he used Verat. viride steadily; pushed it as close to the line of danger from its own poison as possible. Though his measures were, perhaps, not the best, yet they were in accord with his principle, which was in fault.

Sixty years ago, malarial fevers, called bilious fevers, were abundant, and the principle of treatment was to heat the system, cause profuse sweating, and thus carry out of the system the special poison which caused the disease. The principle of counter-irritation to allay certain local sufferings, as violent headaches, sickness

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of stomach, etc., was carried into practice by the application of large blister plasters kept on the surface of parts of the body for the space of twelve hours, then poultices or wilted cabbage leaves applied for days to continue a purulent discharge. Hot teas and heavy bedclothes were also applied to continue the sweating. Not a drop of cold water for drink.

So I might recall several principles of treatment, but all this has been merely preparatory to my real object—the presentation of the principles of treatment in diphtheria, scarlet fever, measles and some other inflammatory diseases; also, the means to be used successfully in accordance with these principles.

Some of you have doubtless learned from my writings how I was led, sixty-six years ago, to rebel against the principle of treating measles and scarlet fever by heating the system by means of hot teas, warm bricks to the feet and alongside the patient in bed, excess of bed clothes, and to substitute other measures for relief in accordance with my principle that the *heat of the body in those diseases should be subdued;* and that the most pleasant and, by far, the most efficient means of effecting this was the application of cool or cold water over the surface of the body by sponging and on the head by affusions of the cold water.

Such was the principle of treatment advocated by me sixty years ago, and cold water the means by which the principle was carried into effect; and now, though I join with those who sometimes doubt the veracity of one who, in advocating a certain mode of treatment, says, "I never lost a case," yet it is incumbent on me, now and here, to say that in all those years, from 1829 to this day, not one of the many hundreds of cases of measles, etc., treated by the cooling system, under my care, proved fatal. Yet, even within a few years I have known, both in city and country, children to be lost under the hot treatment.

My position, when defying the old heating treatment so universally believed in by parents and physicians, and in its place substituting a treatment based on the very opposite principle—the use of *cold* drinks and *cold* water applications to the heated body—was not a pleasant one, especially when physicians of many years' experience in practice, denounced my mode in most positive terms as imperiling the lives of my patients. Indeed, had I lost only one or two of my earliest cases, I think I would in all probability have been prosecuted for criminal malpractice. I was so young, so inexperienced in practice, had no precedent to support me, that now it seems to me I was in a perilous situation. But thanks to a kind Providence, I escaped; my patients all recovered; all were happy, as were the parents, under the treatment.

Two years afterward, when an epidemic of scarlet fever occurred, I regarded the same principles of treatment applicable, and when, on or about 1850, we were confronted with a disease—diphtheria—which in its severest forms seemed the counterpart of what we had been used to call "malignant scarlet fever," or "putrid sore throat," I regarded the proper principle of treatment to be the same as in the two other diseases, and that the cold treatment was demanded for the safety of the patient.

I have so repeatedly given my views in relation to scarlet fever and diphtheria that I need say nothing more on these subjects than that, having carefully observed what has been written on other modes of practice and having seen their fatality, I am constrained to say, after so long and vigilant a practice, that there is no other mode of treatment in vogue which at all equals, for comfort to the patients and their speedy and successful restoration to health, that of *reducing the heat* of the body by the judicious application of cold water in the various ways in which it can be applied; and aided, too, by the topical application of ice, when that is needed, to allay the inflammation of the tonsils, sub-maxillary glands and the inflammation of the laryngeal and tracheal mucous membrane in cases where these are so affected as to cause croup. And here I may say that this croupy condition, though one considered almost certainly fatal when occurring in diphtheria, is quite remediable under the proper and persistent application of ice to the front of the trachea, prior to the formation of much diphtheritic membrane. In other words, applied on the first announcement of the croupy cough or voice. In my own practice I had but two very bad cases, and both yielded to the continuous application of pounded ice,

with just sufficient water to bring the ice and ice water in close contact with the fore part of the larynx and trachea, and kept steadily there night and day until the inflammation is subdued. All have heard the reports by practitioners of its great value in ordinary croup. Nor is it strange that it should bring relief. It is impossible for the inflammation to extend under its application. You start at the assertion that it is impossible, and yet it is true.

In 1853, I was called to a woman a few days after the birth of a child, and found her suffering greatly from an inflammation of the left mammary gland. It was swelled, tense and fiery red. I proposed to cover it with cloths wet with ice water and to be renewed every few minutes. She feared a chill, but finally consented. Finding it most grateful, the heat and burning sensation reduced and the pain much abated, she kept the nurse steadily at work applying the cold water cloths.

As the relief was so decided, I procured a bladder; half filled it with small lumps of ice and enough water to form a cushion which would closely fit the whole breast. A few hours showed me that the danger of suppuration was averted. From that day until I ceased to practice a few years ago, I used the ice in every case presented to me, and always with immediate comfort to the patient and instant arrest of extension of the inflammation.

About forty years ago, I was called to a child, aged about one year, ill with scarlet fever. The glands and the tonsils were so swelled that it could not nurse. It was in a pitiable condition. I told the mother I had never saved so young a child in that condition, but if she would let me apply ice to the swelled glands, I thought it could be saved. She assented. Lumps of ice were lapped in two thicknesses of old wet muslin and held in place by the "helps" all night. There was striking relief. In a few hours the child could swallow and it was evident from its quiet condition that the remedy was most agreeable. The means were continued, and in a few days the little patient was well.

From that day to the present time, in scarlet fever and in diphtheria, when the tonsils and subjacant glands were inflamed and greatly swollen, I have used ice freely and with gratifying success.

Wherever inflammation exists in a part accessible to the ice, as in the cases named, as well as in pleurisy, peritonitis, pneumonia, and in traumatic inflammations, it can be held in check—utterly subdued—by the proper use of ice.

I may only call attention to the valuable results produced by the cold treatment of typhoid and other fevers. In the hospitals of Germany the death rate has been reduced to one per cent. In this country the cold treatment, as used by Brand in Germany, is equally successful, and is becoming common practice in hospital and even in private practice.

I must close, though with your permission I will be glad to add a few words, as it is not probable that I shall ever again speak on this subject.

Is it true that for sixty years I successfully treated every case of measles under my care, by the use of cold water to reduce the temperature of the body?

And that for almost sixty years I used the same means to allay the excessive fever so common in scarlatina? And that since 1850, I have used the cold treatment in all cases of diphtheria with, as I believe, much better results than those obtained by others with any other kind of treatment? And is it true, as I declare it to be, that this most efficient means of reducing the abnormal heat of the system and the consequent suffering of the patient, does not exclude the use of medicine to aid in the treatment? Or have I given false testimony? Is it true that typhoid fever, for the last half century so greatly dreaded and so fatal, has been by the cold bath treatment of Brand, reduced to one per cent. mortality; and is now, in our county, in both hospital and private practice regarded as the best mode of treatment, not only in the disease named but in all febrile conditions; or have the eminent men why have reported on the subject, done so falsely?

It we have all spoken truly, why shall not our physicians of to-day resort to this means of reducing the fever and discomforts of the suffering patient, inasmuch as the cooling treatment does not preclude the use of their favorite medicines?

Should they do so, I feel confident that we would never again see three or more children swept, in a single week, from one family, as has so frequently occurred this past winter in the region around, under the treatment in vogue.

But I am confronted by reports in medical journals in which the writers state that they have tried the cold or cooling treatment in diphtheria and even in scarlet fever, and did not find it efficient. I can readily believe it. Many have made such reports and the reports have been placed on record. But there are also many scattered over this State and over our whole country, who give strong testimony in its favor. The objectors to it are those who have never used it, and those who prescribe for the *name* diphtheria and not for the disease itself. To them the affection of the nervous system, sickness of stomach, inflammation of the tonsils, submaxillary glands, the pharynx and larynx, signify nothing. They have a treatment "good for diphtheria." Enough for them to know.

But there are some who have tried the cooling treatment with a desire that it should succeed, but who did not find it so efficient as had been reported. There are many honest reports of this kind, and the hopes of success were defeated by the inefficient application of the means by those in attendance on the patients. We well know that if the cold water and the ice be not in close contact with the inflamed, heated part it cannot have an effect to subdue the heat or allay the inflammation. Take for example a highly inflamed breast; hold the ice but the width of a knife-blade from it and it will be found utterly useless, as useless as if put around the bed-post. Many physicians have been thus deceived. Unless the most positive directions be given, and the nurse shown how the means should be applied, failure must result.

In the application of the ice to the swelled and inflamed tonsils and glands, and to the fore part of the neck when a diphtheritic exudation is taking place in the larynx and trachea, the ice should be mashed and closely fitted to the part affected. Often have I seen the bladder or cloth holding the ice, hanging an inch or two, or even more, away from the parts affected, instead of being closely fitted to them. The physician cannot stay all the time with the patient, and the nurse, regarding the ice not as the treatment but as merely an aid to the medicine, gives it but little attention.

I am desirous to reach the truth on this subject; to know whether the present fearful mortality is owing to the present erroneous belief that the fever is due to the increased activity of the heart, and the principle of treatment is to subdue the fever by the use of arterial sedatives—the treatment which results so disastrously.

Whatever may be the cause of the fever, whether the little entity called microbe (millions of which are always with the healthiest of us), or any other cause, we know that the fever is the cause of the increased action of the heart, and that there are no means of reducing the high temperature—the fever—so efficient as the application of the means to which I call attention, and which I have tested for more than half a century.

In the hope that a treatment less fatal than that now in use will soon prevail, I leave the subject with you.

Empress Carlotta's Death Caused by Poison.

According to a story now going the rounds of the press, and credited to "Gen. Rudolfo Gunner, commander of Maximilian's body-guard during his brief and troubled reign as emperor," it was not adversity that drove his empress insane. She was poisoned by an old Indian woman who had been hanging about the palace begging alms, and in this way gained the opportunity of giving her the decoction of *talavatchi*, a poison described as "more dreadful in its effects than anything in the sinister pharmacopeia of the medicis." Given with skill, it kills the mind and leaves the body to live on unimpaired. In large quantities it produces hallucinations, followed by unconsciousness and death. The *talavatchi* given the Empress was judged to a nicety. It wrecked her mind, but left her body healthy. Outside of flowers the world to her does not exist. The love of home, country and friends passed away after the draught of the Indian witch's decoction.

"The administration of this poison," says General Gunner, "formed one of the sciences of the ancient Aztecs. Their descendants, who are the peons of Mexico, have preserved the knowledge, and in their hands it becomes a dangerous and subtle weapon. It can be given in coffee in small quantities day by day, and the victim will gradually become insane or an epileptic, or both."—*N. Y. Med. Times.*

TRACTION DIVERTICULUM OF THE STOMACH COMMUNICATING WITH THE PANCREATIC DUCT.*

HEINRICH HEUBEL, ERLANGEN, GERMANY.

The case reported is one of Professor Bostroem's, observed at Erlangen in 1878, and is published by permission.

The well-known studies of Von Zenker have shown that traction diverticula of the œsophagus begin with an inflammation of some extra-œsophageal tissue, usually a lymph node, which becomes adherent to the œsophagus. The subsequent cicatricial contraction almost inevitably produces a pouching out of the œsophagus, since the inflammatory mass is usually firmly anchored to other deeper tissues. The same process may occur with other hollow organs, especially with the intestine on account of inflammation of the gall bladder, with resulting fistula.

Although the lymph nodes lying behind the stomach and the pancreas lying beneath it, might, *a priori*, be expected to produce the same lesion of the stomach, the following case is the only one which the writer has been able to find reported.

The patient had been confined for a few weeks at the District Insane Asylum at Erlangen. For twelve years, he had been excitable and anxious and had suffered from insomnia. These symptoms had been exacerbated by an attack of erysipelas of the head two years previously, and had increased notably in the last year of his life. The patient was kept in bed with difficulty, and was always unclean in spite of the precaution of placing him frequently on the commode. He took only liquid nourishment and would spit out all solid food, especially meat. He was very thirsty and drank soup containing egg and a cognac mixture eagerly. After a brief improvement had set in, the patient again had an appetite for bread, though he digested it slowly; but always had an antipathy to meat. Collapse, with tracheal râles, occurred suddenly while the patient was on the commode, and death resulted in a few hours.

On section, there was found considerable hyperostosis of the skull; marked hyperæmia of the brain, with thickening and cloudiness of the meninges; chronic hæmorrhagic pachymeningitis of mild grade, and chronic hydrocephalus. Hyperæmia and œdema of the lungs, which were decidedly emphysematous, and bronchial catarrh were, apparently, the ultimate causes of death.

From the third to the eighth rib, on the left side, there was an old united fracture with a cushion-like thickening on the inner side. The fractures were almost in line, two or three centimeters from the attachment of the cartilages. The left lung was adherent to the costal pleura in the greater part of its extent. The mucous membrane of the throat was pale; that of the œsophagus, in the lower half, was somewhat congested venously, and was beset with numerous little warts.

The stomach was contracted and contained only a little watery fluid with flocculi of mucus. The mucous membrane was covered with an abundance of soft grey mucus, was slightly injected, was finely mammillated (*gewulstet*) and thickened, and, in the neighborhood of the lesser curvature, on the posterior wall, it was quite coarsely mammillated. The submucosa and especially the muscularis, were so thickened that the whole organ felt stiff. About the middle of the lesser curvature, somewhat more toward the pylorus and the posterior wall, was a funnel-shaped diverticulum of the mucous membrane, whose opening into the cavity of the stomach had a diameter of five or six mm. The thickened and puckered, but nowhere cicatrized mucous membrane, was gathered into exquisite folds. Through this opening into the fistulous canal, a probe passed obliquely to the right, posteriorly and superiorly, to a depth of four cm.

After careful preparation, the diverticulum showed on the outside, a beautiful infundibular prolongation of the stomach wall, one cm. in length, the apex being

*From the German Archives for Clinical Medicine, Volume 55. Translated by A. L. Benedict, A.M., M.D., Lecturer on Digestive Diseases, Dental Department, University of Buffalo.

firmly united with the pancreas. The outer, longitudinal muscular fibres were sharply defined at the neck of the diverticulum, but did not extend farther; the internal circular fibres, on the contrary, extended to the apex of the funnel where it was adherent to the pancreas. With the probe one could easily penetrate through the diverticulum and into the pancreas, reaching what proved to be the pancreatic duct.

The pancreas was strikingly deformed. Though of normal length (20 cm.), it was slender and flaccid, and measured in breadth 2 cm. at the tail; 1.5 cm. in the middle, and was only 5 mm. in thickness. At the head it was irregularly bossilated. Except at the latter part, which will be described subsequently, it was extremely flabby. In the center was to be felt a tough cord. At both sides of this a number of firm, elastic kernels of various sizes, up to that of a small pea, were palpable. The parenchyma consisted of very soft and flaccid discoid lobules, loosely attached one to another. On section most of these were shown to be encapsulated masses of adipose tissue; a small number consisted of pale gray and flabby parenchyma. The firm, elastic kernels which were scattered in the tissue like shot, revealed, on section, little gelatinous bodies (literally corks), which left behind smooth-walled cavities of corresponding size.

On incision, the cord which was palpable in the midst of the pancreas, proved to be the duct of Wirsung. In its peripheral part, 11 cm. length, in was considerably and pretty uniformly dilated, measuring 12-13 m.m. in diameter. Its wall was greatly thickened, up to 1 m.m. It was very stiff; the inner surface was opaque, cloudy, pale-gray but perfectly smooth. The mouths of tributary ductlets were not expanded; for the most part they were contracted or closed. The cavities filled with gelatinous matter, already mentioned, could not be emptied into the pancreatic duct by pressure. After the course of 11 c.m., the duct of Wirsung became again narrower toward its mouth, and here, for 3 c.m., its breadth was only 7 m.m. Its wall, however, was still more markedly thickened, and the inner surface was not only thickened and opaque, but lined with irregular white scars. Between the wider and the narrower portions of the pancreatic duct, to the right and upward, there was a slit-like fistulous opening, 5 m.m. long and 1 m.m. wide. Into this extended shining lines of scar tissue from the inner coat of the pancreatic duct. Through this opening the probe passed immediately into the adherent gastric diverticulum.

On the farther side of its narrower and scarred portion, the pancreatic duct again became quite suddenly broader and, for a length of 2 c.m., it had a diameter of 17 m.m. By pressing on the surrounding tissue a clear, thin mucus was forced out from the finer branches of the duct. From this part of the duct, a cavity of the size of a hazel nut was reached, surrounded on all sides by the thickened pale-gray, cloudy, opaque, moderately smooth, scarcely cicatrized and, in part, finely papillary mucous membrane of the duct. Around this cavity was tough connective tissue, enclosing above a completely isolated cavity as large as a cherry pit. From this was evacuated a clear mass of mucus. The inner wall of the cyst was unevenly villous.

Around the cul-de-sac of the duct of Wirsung, involving the head of the pancreas and fitting into the concavity of the duodenum, lay a tumorous mass, tough and almost as large as the fist. This consisted of numerous tense cysts, thickly crowded together, and varying from the size of a pin-head to that of a hazel nut. These were uniformly filled with clear transparent, gelatinous matter, and limited by a very thin, smooth, translucent membrane. The intervening structure was of tough connective tissue. After evacuating a large number of the transparent masses, the tumor had visibly decreased in size, and there now remained larger cavities with similar contents, connected with the pancreatic duct, especially with that part of it which had undergone cystic dilatation. Through the latter, the probe led through an opening 1 cm. long, 2 mm. wide, into a cavern 22 mm. long and wide, and 7 mm. in height. This was almost entirely filled with a mass of mucus, partly clear and translucent, partly whitish and opaque. The wall of this cavern was very uneven, marked in spots with greyish-white scars, and presented numerous mammillations. The wall of the pancreatic duct ceased at the entrance to this cavern with a sharp scar-like line of

demarcation. From the cavern there was an immediate communication through a round opening as big as a pea, into the beginning of the lower, transverse portion of the duodenum. From an upper pouch of this same cavity, the probe passed also into the descending portion of the duodenum, emerging in the vicinity of the mouth of the ductus choledochus.

From the cystic dilatation at the end of the pancreatic duct, there was a passage, nearly in line with the duodenum, into a cavity the size of a cherry, which was distended with thick mucus and lined with a membrane grayish-white and slate colored. From this, through a hole the size of a cherry-pit, there was a passage into the desceuding portion of the duodenum. From the same cavity there were three other passages into the duodenum; the first leading into the the duodenum at the junction of the superior transverse and the descending portions; the second, into the superior transverse portion; and the third into the same about 1.5 cm. from the pylorus.

The part of the duodenum involved, 6 cm. in length and 3.5 in breadth, was driven upward by the tumor, and was covered with very adherent, soft, clear mucus. After cleansing this away, the mucous membrane appeared everywhere pale, and the surface was very uneven on account of the pressure of the tumor. The mucous membrane extended to the bottom of the depressions, and here were found the various fistulous openings already described. From this side they appeared still more numerous. Some were pervious for a coarse probe; some, for the tip of the little finger. The mucous membrane passed pretty deeply into some of the broader openings, and was sharply demarked from the cicatricial tissue that took its place. Immediately beneath one of the wider fistulæ, the ductus choledochus opened. This duct was dilated in its whole course up to a diameter of 2.5 c.m. · Its wall was otherwise normal and soft.

All these numerous small and large fistulous openings, which were found from the immediate vicinity of the pylorus to the lower transverse portion of the duodenum, were closed by a dendritic growth of vascular villi. The villi were over a centimeter long; some slender, others broader. Laying these back, the fistulous openings became visible, and it appeared that the villi surrounded the margins of the fistulæ like a wall, and, in places, even grew from the mucous membrane that extended into the fistulæ. The exuberance of villi seemed to be limited to the area of fistulous openings. In the descending portion of the duodenum, however, where several fistulæ were located along with the opening of the ductus choledochus, there were greater superficial expansions of villi, and more careful examination showed that the mucous membrane between the fistulæ was much undermined and elevated into bridges, and that, in such places, finer fistulæ opened into the larger ones.

The entire lymphatic system in the neighborhood of the pancreas, was normal.

The gall bladder was distended with thin, pale, orange-colored bile, in which were swimming a number of soft, compressible, brownish concretions.

The liver was atrophic but otherwise normal.

Common Membranous Sore Throat.

The correctness of the position taken by Professor J. Solis-Cohen, Sir Morell Mackenzie and other authors, as to the existence of *membranous sore throat, not diphtheric in character*, has come to be universally admitted, and the claims advanced for certain methods of treatment in diphtheria proved to be based upon erroneous diagnosis. A recent illustration of this fact has come under notice at the Laboratory of Bacteriology, where cultures from three cases of membranous sore-throat, much resembling diphtheria in appearance, in two of which there was high fever accompanied with constitutional depression, proved to be free from Klebs-Loeffler bacilli.

Hemoptysis.

For the medicinal treatment of hæmoptysis, in pulmonary tuberculosis, Prof. S. Solis-Cohen prefers calcium chloride to any other drug.

The pure crystalized salt is specified on the prescription, so that chlorinated lime shall be dispensed. It is given in glycerin or simple elixir and water, or in infusion gentian, 10 grains to the teaspoonful; the ordinary dose in the active stage of the hemorrhage being 10 grains or 15 grains every second hour. As improvement takes place the frequency of administration is reduced.

AN HISTORICAL SKETCH OF DIABETES MELLITUS.

CHARLES B. WILLIAMS, A.B., M.D.,* PHILADELPHIA, PA.

Diabetes was one of the few diseases that was distinctly recognized and described by the ancient fathers of medicine. Some of the various names under which it has been described in the classics are quite curious, viz.: *Hydrops matellæ; profluvium urinæ; fluxus urinæ; morbus sitibundus; diarrhœa ad urinas; dipsacon;* etc., etc.

Hippocrates makes no mention of the disease in his works, but Theophilus, Actuarius, Aretæus, Aetius, Trallianus, Avicenna and Galen, besides many others, have written largely upon the subject of diabetes.

Now comes the question whether many of the cases mentioned by the classic writers were true cases of diabetes. There can be no doubt that some of the cases described were true cases of diabetes mellitus. Let any one read the description of this disease given by Aretæus and he will marvel at the pen picture that this great observer has made. Of course, Aretæus was describing a case of true diabetes and giving all of its symptoms, which were the same then as now, without being aware of the saccharine nature of the urine, for this was a fact that was discovered centuries later. And such must have been the case with all the writers who preceded and followed Aretæus up to the time of Willis, the discoverer of the true diabetes mellitus, in the time of Charles II.

A number of the cases that have been described are, indeed, doubtful cases of true diabetes. Scribonius mentions a case where the quantity of urine passed by a patient was four times the quantity of liquids that was ingested. The case published by Sir Kenelm Digby, of the nun at Rome, who for some weeks passed more than two hundred pounds of urine in every twenty-four hours, must be taken *cum grano salis.*

Galen, Lib. vi. aff., cap. 3, states that he saw diabetes but twice. Diabetes as Riverius knew it, "is a quick and plentiful sending forth of drink by urine; after which there comes a violent thirst, and consuming of the whole body."

As stated above, Dr. Thomas Willis, who lived in the time of Charles II., was the first physician who positively noticed the saccharine nature and honey-like taste of the urine in the true diabetes.

Van Helmont, long before Willis's time, had said that the blood of a diabetic patient is changed to a whey-like urine. "Atque in diabete totus cruor mutatur in lotium lacteum."

Sydenham says:* "It sometimes happens, though very rarely, that the aged, after having been long afflicted with an intermittent, and weakened by improper bleeding and purging, are seized with a *diabetes,* though the intermittent be perfectly cured."

Dr. Cullen also found saccharine urine after a long fever in an old man.

Mr. Morton has given the case of a master wheeler, whose father had lost all of his male children with a consumption following a discharge of saccharine-tasted urine during dentition. Guidott, while he was a student at Oxford and only eighteen years of age, attributed the saccharine nature of diabetic urine to an imperfect assimilation of the chyle.

The following are some curious cases of diabetes collected by Dr. Thomas Girdlestone, A.D. 1799: "Avicenna remarks that the eating of quinces brings on diabetes. Dolaeus relates the case of his uncle who, in one night's time, brought on a diabetic discharge by the drinking of cider. John Baptist: Theodosius says he had seen the true diabetes only in two women, which disease they had induced by the abuse of Roman wine. Dr. Home knew the chylous species of diabetes 'brought on by too frequent doses of jallap et mercur dulc.'"

Dr. Falconer observes that the Japanese are subject to diabetes and atrophy from the use of tea, and that he knew a man who induced a diabetes by the drinking of spruce tea. Mr. Charles Darwin thought that diabetes was caused by the retrograde

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* Vide Swan's Sydenham, p. 313.

motions of the lymphatics from their valves being diseased. Dr. Rollo thinks, "a morbid condition of the stomach, and a general diffusion of saccharine matter, with probably some change from that of health in the fluids of the system, are the immediate causes of diabetes."

Dr. Benjamin Rush, when asked by William Washington of Alexandria, Va., a student at the University of Pennsylvania who was about to prepare a thesis on diabetes, what his theory of diabetes was, replied:—"Diabetes consists in a morbid or irregular action in the whole sanguiferous system, or in other words, it is a state of fever accompanied with a local determination to the kidneys. This is evinced by its being attended with all those symptoms which are usually the consequence of other febrile states of the system; viz.: pain, increased action of the pulse, thirst, increase of heat, and a flushed countenance. These are all inseparable from it, and it must be acknowledged that they are the effects of febrile action." In all of the cases of diabetes that Dr. Rush attended, the pulse was found to be full, tense and quick.

Diabetes mellitus, as we now know it, is essentially a chronic affection, and a disorder of nutrition characterized by the constant presence of grape sugar in the urine and the blood; added to which there is an excess in the urinary discharge, together with the progressive loss of flesh and strength.

COMMUNICATIONS.

THE PSYCHOLOGICAL ASPECT OF HYPNOSIS.

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The theories, psychological and physiological that have been proposed to account for hypnosis, are very nearly as numerous as the theorists, and not one has met with universal acceptance. Yet we are by no means relieved of the responsibility of framing hypotheses. Scarcely ever has a great scientific generalization been established that was not constructed out of the ruins of a thousand hypotheses, and unless those thousand hypotheses had been devised, tested, and successively found wanting we would never have had the material out of which to construct the true explanation. It is in this light that I regard the theory which I shall advance.

It is based upon the facts of hypnosis chiefly as observed and reported by the school of Nancy, which my own limited experience has in every respect confirmed, and is most nearly akin to that of Dr. Despine. It is an effort to bring the facts of hypnosis into line with the psychological doctrine of the dynamic mental state; a doctrine, which was, I believe, first taught clearly by Herbart, but for which a satisfactory scientific foundation has been but recently supplied by the researches of neurologists into the functions of the cerebral cortex. Scanty and disputable as our knowledge on these points is, there is a substantial agreement between the main results of introspective observation on the one hand and clinical observation and direct experiment on the other, which is exceedingly encouraging.

One will readily understand that within the limits of this paper I can do no more than state and make plain the leading features of the tentative theory upon which I am now working. It is a theory that brings the chief phenomena of hypnosis into harmony with fundamental psychological principles and with the fundamental principles of cerebral physiology as far as I understand them, but which must undoubtedly suffer extensive modification as our knowledge of mind and brain progresses. I shall, however, in concluding, point out some of the dangers attending the practice of hypnotism and say a word as to the relation often supposed between hypnotism and telepathy.

It has long been known that certain in-

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dividuals can be put, by the use of definite agencies, into a condition closely resembling sleep, but differentiated from it by sundry traits. These agencies are numerous, but all agree in involving the checking of the train of ideas, the restriction of attention to one idea or sensation, or to a constantly recurring but narrowly limited series of sensations, such as is given by passing the hands before the patient's eyes, by light touches or stroking, by rotating the head upon the shoulders, and so on. After the lapse of a time that varies in different individuals from a few seconds to thirty minutes or more, phenomena closely resembling sleep supervene. The eyelids become very heavy; they close; the field of consciousness becomes narrower and narrower, wanes and finally disappears. When the patient awakes, he believes that he has been asleep. But we can show that he has not been asleep in the ordinary sense of that word. He is nearly always cataleptic; his limbs tend to retain any position impressed upon them by the operator. He appears to be keenly alive to all that the operator says and does, but has neither eyes nor ears for any one else. This is the so-called phenomenon of *rapport*. He is frequently partially and sometimes totally analgesic. Pin-pricks and pinches are felt as touches, and burns as warmth. Sometimes, although not as often, he presents hyperæsthesia of sundry senses. He can read fine type at a considerable distance, can hear sounds that he cannot hear in the normal state, or can distinguish the compass points when very near together. But the most marked and most constant symptom is his absolute obedience to the word and wish of the operator. If told that he cannot open his eyes, cannot bend his arm, he cannot. If told to open his eyes, he opens them; if told that an elephant, a ghost, or anything else you please is before him, he sees it; and similar hallucinations can be produced in all the other senses. Negative hallucinations can also be produced. The operator can by a word destroy sight, hearing, touch and other senses, or can make the patient blind to one object or person, deaf to one sound, or the voice of one person. Nor is it necessary that the suggestion be executed while the patient is in this abnormal condition. It may be executed hours, weeks, or even months afterward. Sometimes the patient passes spontaneously while executing it into the condition in which he was while it was given, and he is then usually not aware that he has done it. Sometimes he does not so relapse, but executes it in his normal state, and then he will often devise all manner of plausible pretexts for his action —anything, indeed, will he allege except the true reason, and that he rarely suspects. Finally, and this is a most characteristic symptom, no matter how deeply he appears to sleep, he can nearly always be awakened by a word. If I leave the patient undisturbed for a time while thus apparently asleep, all these phenomena usually disappear. He is no longer cataleptic, analgesic, hyperæsthetic, or suggestible; he is no longer *en rapport* with the operator, can no longer be awakened by the simple command; in other words, he is truly asleep in the ordinary sense of that word. Sometimes, however, if left to himself, he will awaken spontaneously, and no evil effects follow. He may feel a slight drowsiness, lassitude, or chilliness, such as we often feel when awakened from a nap, but nothing of a more serious nature need be feared.

I have described to you the hypnotic state in its most marked form—that which is known as deep sleep, or lethargy. About twenty per cent. of all normal and healthy adults, if we accept the conservative estimate of Dr. Doll, can be put into this condition. Of the other eighty-odd per cent., about twenty or twenty-five per cent. are not at all or but little affected by the agencies which I have described. A slight drowsiness and weight in the eyelids they will probaby feel, but no more. The remaining fifty-five or sixty per cent. are affected in various ways and to various degrees. Hardly will any two individuals present exactly the same phenomena, and scarcely any two writers agree upon the degrees that are to be recognized. Dessoir recognizes two, Charcot three, Forel three—but his three do not coincide with those of Charcot—Liebeault six, Chambard six, Bernheim nine, etc. Of these, the two proposed by Dessoir seem to me worthy of note. In the first grade only the power of originating voluntary movements is affected. Consciouness remains undisturbed, but the voluntary muscles are more or less withdrawn from voluntary control. The smaller and more high-

ly specialized groups, such as those controlling eyes, lips, tongue and fingers, are the first to be affected, then the larger groups. Suggestions affecting these muscles will then be executed, but hallucinations cannot be produced, nor will post-hypnotic suggestions be executed. In the second grade both the sensory and motor systems are affected and are subject to the suggestions of the operator. This is usually found in lethargy, but frequently without it. In the first grade only the functions connected with the efferent nerves are affected, in the second those connected with the afferent as well.

It is agreed by all observers that the most characteristic trait of hypnosis is the heightening of suggestibility. To this, catalepsy, automaton-like obedience, and the production of hallucinations can be reduced. Spontaneous analgesia and hyperæsthesia cannot be reduced to suggestibility unless the operator has carelessly dropped some remark in the presence of the patient indicating what he expects to find; yet in explaining suggestibility we shall, I think, find the clue to the explanation of these phenomena also.

Suggestibility is found in all normal individuals. Volumes have been written in illustration of the fact that the mere lodging of an idea in a man's mind is of itself a certain momentum tending to affect his action. It may take root and grow, or it may seem to have fallen upon barren soil and produce no effect. The world-wide phenomena of unconscious imitation, the influence which we unconsciously receive from our surroundings and exert upon one another, the curious epidemic manias of the Middle Ages, the periodic epidemics of crime, of which we have recently had several, all these are illustrations of the fact that the suggested idea is a momentum that has its own weight, which may indeed be overpowered, but which must always be taken into consideration. Now, in all degrees of hypnosis and in many conditions not classed as hypnotic the force of the individual idea is greatly exaggerated. In the most extreme cases it is no longer one of many momenta; it is the controlling power which seems to fatally determine what the man shall do, and even what he shall see and hear. Of such a man we say that his suggestibility has been heightened.

The explanation, therefore, of hypnosis, from the point of view of the psychologist, turns chiefly upon the explanation of suggestibility, and upon that we must for the present concentrate our attention. If suggestibility is characteristic of the normal man, its explanation must be found in the fundamental laws of mind and brain. We must then determine what conditions limit suggestibility in the normal state, and in what way we may remove these conditions and heighten it.

I must ask indulgence for a few minutes as I leave the problem of hypnotism proper and endeavor to sketch the main outlines of psychological theory or method which we find to-day very wide-spread among neurologists, and rapidly gaining ground among those pyschologists who bring to their proper work some acquaintance with physiology and pathology. According to this view all mental states are accompanied and conditioned by physical processes in the cerebral cortex. Upon this there is substantial agreement, and it may be regarded as the fundamental postulate of physiological psychology. Its converse, that every cortical process is accompanied by a mental state, is still disputed. If we admit this fundamental postulate, we are compelled to admit its corollary also,—that all the laws that govern mental states must admit of expression in physiological terms. And this corollary is fully borne out by the facts, as far as we are able to observe them. We must, then, learn to look upon the mental state precisely as we look upon all physical things. Scientific research in the physical world resolves itself into an inquiry into the causes and effects of phenomena, and the case is not otherwise in the mental world. The mental state must have its cause and its affects as certainly as the processes with which it is connected must have their causes and their effects. Its causes and effects need not form clearly distinguishable portions of the warp and woof of our conscious life. They may lie in the dim region that we call subconscious; but they exist, and if our knowledge were exact, we could reason to them deductively with infallible certainty. Now, when we examine our mental states narrowly, we find that even in all the complexity of consciousness we can frequently trace out their causes and effects. Let us examine a few of these cases.

Every mental state is susceptible of development. Its dimmest and least de-

veloped form is that of the nascent idea just emerging into consciousness. Its most developed form is found in the vivid sensation which is qualitatively like that idea. This intensity is primarily determined by the intensity of the central or centripetal stimulus by which the corresponding cortical process is awakened; but it also depends upon the cerebral constitution of the individual and upon sundry other conditions.

Mental states have effects. Their ideational effects have long been known to psychologists, and studied under the name of association of ideas. I need do no more than allude to this common phenomenon of subjective life. They have also motor effects. The relation of the vaso-motor system to the mental state is no new discovery. The blush of embarrassment, the pallor of fear, fainting at the sight of blood, are trite illustrations. Recent investigations have shown, however, that the connection between mental states and the distribution of the blood-supply is of the most thorough-going nature imaginable. Mental states also effect the voluntary muscles directly. To Alexander Bain belongs the honor, I believe, of having first established the relation of the motor idea to the production of the movement which it represents. The effect exerted by mental states upon the secretions of the skin, upon the salivary, mammary, and other glands, is a matter of daily observation; but their effect upon the processes of nutrition and repair is by means as common or as universally admitted. Yet it seems to me that we have sufficient experimental as well as clinical evidence to warrant our admitting the existence of such effects, although we do not as yet understand the nervous mechanism by which they are produced or the conditions under which they operate.

Not only have mental states positive, they have also negative effects. These negative effects are generally grouped under the the term "inhibition." They are exceedingly obscure. The development of any mental state seems to affect unfavorably the development of simultaneously nascent but independent states—a phenomena commonly treated by psychologists under the title "passive attention." Individual sensory states sometimes seem to arrest one another directly, perhaps by a species of interference. Motor states can certainly check one another. Into these and kindred questions I shall not at present enter. I have, I hope, said enough to illustrate the fundamental law of which I speak—that mental states, representing to us cortical processes of whose precise character we are wholly ignorant, must be regarded as belonging to the orderly system of nature quite as much as those cortical processes with which they are connected, and that we are entirely justified in ascribing to them those dynamic characteristics, those causes and effects which we ascribe to all physical phenomena. And into those characteristics, causes and effects it is the business of the psychologist to inquire.

It is evident that in an inquiry into the causes of any such state or process we must go over very much the same ground as we have gone over in dealing with its effects. It may be caused *ab intra* by the operation of such antecedent states and processes as I have just described, or it may be caused *ab extra* by some such perception. In general we term all states originated from without, "suggestions;" and those originated from within, "auto-suggestions." Of all the agencies by which I can originate an idea in the mind of another, none is as certain and as definite as language. Hence we commonly think of the suggested idea as having been suggested by words; but this is only accidental, not essential.

We have now completed our rapid survey of the dynamic mental state regarded as representing to us a cortical process. But it is evident that I have been presenting rather rare phenomena as illustrations of what I conceive to be one of the most fundamental laws of consciousness, and one may justly ask why this law, if it be ever operative, has so long escaped attention. The answer is not far to seek. If only our mental states existed singly, and each were free to develop itself and work out its own results without prejudice to or from other states, there would be little difficulty in determining what those results are. But in all normal states of consciousness the nascent mental state or cortical process finds itself in the midst of countless other subnascent, nascent, or definitely developed states, which it must modify, and by which it must suffer modification in countless and infinitely complex ways. It is, therefore,

very difficult in the normal state to isolate any state sufficiently to distinguish its results from those of others.

Moreover, there exists in consciousness an activity of which the would-be scientific psychologist, anxious to bring all mental phenomena under mechanical or dynamic laws, usually says as little as he may. And certainly at our present stage of knowledge it is impossible to analyze it into any component factors or to determine the laws of its operation. Yet we cannot well ignore it, since it is the most powerful single factor of conscious life. This is what we call the consciousness of self. Sometimes it appears to be latent, and the man reacts upon the stimuli presented to him with almost fatal certainty. But then, again, it appears, and forthwith introduces into the train of ideas and movements an element of capriciousness that was not there before. When it is thus present and exerts its influence over our actions we are said to act voluntarily. The character of this conscious self is largely determined by heriditary influences. But it is also genetically related to the permanent factor in past experience, and may even be described as a function of that permanent factor, since any extensive changes in the latter are sooner or later followed by changes in the consciousness of self. We are, I think, justified in believing that in this at present mysterious inner activity we see the present conscious representative of the net aggregate result of our own past experience, and to some extent that of our ancestors, confronted with and acting upon the nascent and mental state.

We are now in a position to form a more clear conception of what is meant by suggestibility and to point out the chief factors that normally limit it. When we say that suggestibility is characteristic of all men, we mean that any mental state tends to develop to a certain degree and to produce certain definite results. This tendency is not, as a rule, very noticeable, for two reasons: in the first place, any given mental state is but one of many, and we can rarely separate its results from those of others; and in the second, it is always exposed to modification by the most powerful and least understood element of consciousness—the self. I have also tried in passing to indicate those physiological conceptions to which this psychological theory is most nearly related, and, if there be any truth in them, it is evident that the condition which we find in the normal man implies an inconceivably complex inter-correlation and functional coördination between the several portions of the cortex and between the organized systems of processes which we must conceive as existing within it.

Under what conditions, then, does suggestibility become heightened? Heightened suggestibility is found occasionally as a spontaneous phenomenon. Pierre Janet has, for example, a patient who is as suggestible in the waking state as most persons are in hypnosis. She has never been hypnotized. It is sometimes found as one of the effects of certain drugs, among which are alcohol, ether, morphia, and chloroform. More light is much needed upon the question. Many dreams are due to the suggestions given by strong stimuli, which penetrate to the brain and arouse smouldering cortical processes, which pursue their devious ways unhampered by the restraints of waking life, hence the frequently grotesque and unreal character of dreams. It is sometimes possible to cause a person to pass from normal sleep into a condition of heightened suggestibility that cannot be distinguished from hypnosis. An analogous state frequently occurs spontaneously, and is known as somnambulism. But of all the means of heightening suggestibility with which we are acquainted, none is as easy of application and certain in its effects as the concentration of attention and limitation of the conscious field; and those effects are, so far as the subject can describe them, precisely what our study of normal conditions has led us to postulate as the chief requisite to the production of heightened suggestibility. Sometimes the entire field of consciousness appears to fade away. Then we may suppose that the only things in consciousness are the isolated ideas which the operator suggests. In others the definite heterogeneity of normal life gives place to a dreamy state in which the vivid self seems to have retired from the field. In others the self-consciousness remains, but finds itself so weakened that the commands of the operator appeal to it with irresistible power. This enfeeblement or destruction of the self is the most characteristic phenomenon of hypnosis, and is the chief

reason for the heightened suggestibility. The nascent mental state finds the chief obstacle to its independent development removed, and we can study that development and its effects under new conditions.

We must not, however, assume that the development and effects of the mental state in hypnosis are what they are in normal life, or what they would be in normal life were we able to remove other influences without in any way modifying the intrinsic character of the state which we wish to study. The checking or stilling of self-consciousness is the most characteristic change of hypnosis, but it is by no means the only change; and the other changes which are found in different subjects are so numerous that it is impossible to describe them. One of the most common symptoms is what may be described as a species of mental inertia. An idea which in the normal state would awaken a mass of associated ideas, and thus give birth to a long train of ideas, will fall dead and inert in the hypnotized mind; it seems to have spent its energy in getting to existence. But occasionally the exact contrary is observed. A mere hint from the operator lodging in the sensitive brain of the subject will be spontaneously developed into a tragedy or comedy, as the case may be, and be acted out with a vivacity and power of which the normal individual would be incapable. In these and other personal peculiarities, such as the spontaneous analgesia and hyperæsthesia which I have mentioned, we may recognize variations in the distribution of cerebral activity of whose exact character we cannot form even a conception, and which doubtless rest upon organic and dynamic peculiarities in the cerebral constitution of the individual.

What cortical modifications are we to conceive of as taking place in hypnosis? This is a question that is more easily asked than answered. I think we may say with some confidence that the normal cortical co-ordination of waking life is profoundly modified. This is indicated by the inhibition of the activity of the conscious self and the spontaneous alterations in sensation. But if we ask further just what portions of the cortex are chiefly concerned in this modification, it seems to me impossible even to propose a theory. We do not know whether the voluntary activity of the self is definitely related to some cortical area, as the various special senses are, or whether it is related to some cortical layer as supposed by some, or whether it is related to some organized system of processes distributed through the entire cortex. And as this is the physical activity which is most profoundly modified in hypnosis, we may suppose that those portions of the cortex which are concerned with its manifestation are those chiefly modified in hypnosis. Yet, as I have shown, we have reason to suppose that other changes take place whose exact character we do not know at all. If, however, we ask to what other changes this modification of the processes connected with the manifestation of self-consciousness are most nearly related, I think we may say with some confidence that they are most nearly related to the changes that normally take place in sleep. In normal sleep the continuous ebb and flow of molecular change that accompanies waking life slowly and regularly comes to a stop. Some little may remain in various portions of the brain, but it is for the most part, in a state of comparative quiescence. In hypnosis we have reason to think that a similar stilling of the molecular activities begins to spread throughout the brain. In some way which we cannot now explain, the fixation of attention and voluntary limitation of the conscious field inhibits the activities connected with the conscious self first. If we leave the patient to himself these activities will either reassert themselves, or else the same change will spread on throughout the brain until the patient is in a normal sleep. And in the case of some persons this is the only effect that we can produce by the use of the agencies which induce hypnosis in others. But if we do not leave the patient alone, but give him suggestions, we find that a large portion of the brain remains sensitive, that induced mental states or cortical processes —for some authorities contend that cortical processes in the hypnotized patient are not accompanied by any kind of consciousness—work out results which cannot be obtained in the patient while in the normal state. Hence hypnosis is in a sense a normal state artificially prolonged. It would, perhaps, be too much to say, with Mr. William James, of Harvard, that we all pass through the hypnotic state every night while going to sleep. It

seems to me probable that the methods which we use to produce hypnosis have a specific effect in determining the order in which the cortical activities are to sink into sleep, so to speak, which is not found in normal sleep. Yet the changes which take place in hypnosis probably do not essentially differ from those of normal sleep.

The phenomena of the hysterical condition, of epilepsy, of sundry forms of insanity, and of the rare trouble known as double consciousness, present many points of similarity with hypnosis, and we shall probably not be far wrong in classing all together as being due to derangement of cortical co-ordination. Sometimes, as, for example, in some forms of epilepsy, we have reason to believe that this disturbance is itself due to gross local lesions of the cortex. In many of these mental troubles we find derangement in self-consciousness and loss of voluntary control over different sensory or motor areas, and this is not seldom connected with heightened suggestibility. These facts have led many good authorities, notably Professor Charcot and the school of Paris, to regard hypnosis as a neurosis of the hysterical order depending upon some cerebral abnormality. I can, therefore, scarcely conclude this paper without making mention of this view and briefly indicating the reasons which lead me to dissent from it, although I do so with the modesty of the layman.

The researches of the school of Nancy have conclusively shown that the hypnotic state can be induced in the immense majority of normal adults, and they have been unable to discover any relation between susceptibility to hypnosis and hysteria, neurasthenia, or any other recognized disease. If, then, hypnosis is a disease, we are nearly all more or less tainted with it. This conclusion is supported by Moll, Dessoir, Wetterstrand, Forel, and many others. In the second place, I think that it is a nuisance of language to term a state which can be expermentally induced and ended, but which does not spontaneously occur, and which, when thus experimentally produced and ended, does not tend to unfit the patient for the duties of life, a disease. But if ever we find hypnosis occurring spontaneously, it would tend to interfere with the patient's discharging his duties as a member of society, and in that case we would be justified in regarding it as a true neurosis of the hysterical order.

I have said that hypnosis may be regarded as an artificial prolongation of an approximately normal state. But, one may ask, what is the effect upon the patient of this artificial prolongation of a normal state? If the hypnotic state involved, as I am inclined to suppose, a temporary dissociation of cortical processes normally co-ordinated, even though this dissociation be produced by normal agencies, may it not be that by fixing and prolonging it beyond the normal time we may loosen the bonds of union between the different areas of the cortex and produce a true hysterical neurosis? The question is most pertinent, and can be answered only by reference to observed facts. Some few cases of mental disturbance have been reported from the use of hypnosis, but such cases have been so few in number that we are justified in saying that the danger of such results in the case of the healthy patient in the hands of a trained operator is practically negligible. Some slight physical discomfort, as headache, drowsiness, and lassitude, are frequently found, but can usually be removed by suggestion. Headache is a very common symptom. But the only danger which is both serious and common appears to be the production of increased susceptibility to the hypnotic state. This is a very real danger, and we must ever be on the watch against it and cease experimenting at the first suggestion of it. Most authorities believe that we can always guard against it by the suggestion. We can to some degree, but know of no facts that show that the suggestion will last as long as the increased susceptibility to hypnosis.

Apart from the physical dangers springing from the use of hypnosis, we must consider the moral. That moral dangers exist there can be no question. Already several cases have been reported in which criminal assault has been committed by the aid of hypnosis, and the French experimenters have enticed patients to commit imaginary murders and thefts, to sign promissory notes, and to bear false witness in the same way. Yet I do not feel that our present knowledge justifies much apprehension on this score. We hear much in the literature of hypnotism of the cases in which the suggestions succeed, but little of those in which they fail.

And they very often fail, as I shall hope to show you. A suggestion whose execution the patient would find repugnant in the waking state will often meet with great resistance and sometimes fail of execution. The influence of the operator over his patient is much greater than in waking life, but it is perhaps never absolutely complete, and if there are persons who could be induced by hypnotic suggestion to commit crimes from which they would shrink while awake, such persons are probably exceedingly rare and their weakness is rarely suspected. One other danger remains which I must not fail to mention, and that is the danger springing from careless suggestions. I know a gentleman who thoughtlessly told his patient that the devil was after him, and had great ado to save the terrified patient from throwing himself from a sixth story window. The operator must ever remember that his every word is caught by the patient, no matter how impassive the latter may seem, and he must always be on his guard against saying anything of an exciting or terrifying character.

I have never seen any good reason for believing that there is any relation between hypnosis and telepathy. It is true that telepathic phenomena are from time to time reported as having been observed in hypnosis, but such phenomena are also reported in waking life. Most certainly the hypnotized patient is not, as a rule, sensitive to telepathic influences. But even if we admit that he sometimes is, it would not essentially modify the theory which I have outlined, and we would not be compelled to return to the theory of a force emanating from the operator and controlling the subject. We would merely be compelled to admit the possibility of a suggestion being conveyed in some way and by some means not at present understood.

In conclusion, let me say a word or two on the practical principles that should guide us in the use of hypnosis. No one should attempt it without having thoroughly studied the question, acquainted himself with the works of the great authorities, and having had some experience with an instructor. Its use should be limited to purposes of research, instruction, and therapeutics. A witness should always be present. The operator must rigidly respect the personal rights of the patient. He must have his full and intelligent consent to the experiment proposed, and must never endeavor to obtain influence over him at times or in ways other than those agreed upon. He must guard the patient effectually from any future inconvenience arising from increased susceptibility, and if he have reason to doubt his ability so to guard him, he must stop his experiments. And in the last place, and this principle includes all the others, he must ever have in mind and at heart the true welfare of his patient, and act in accordance with it.

DISLOCATION OF THE HEAD OF THE HUMERUS COMPLICATED WITH IMPACTED FRACTURE OF ITS ANATOMICAL NECK.

JOHN B. ROBERTS, M.D., PHILADELPHIA, PA.

A boy, nine years old, was brought to my clinic at the Women's Hospital on February 29, 1895, by Dr. Marie K. Formad on account of an injury to his left shoulder. About a week before Dr. Formad saw the boy professionally and ten days before I had an opportunity to examine him, he had fallen at school and struck his shoulder against a wall.

He had been brought to the hospital two days before I saw him, and Dr. Anna M. Fullerton, with Dr. Formad, examined him under ether and reduced what seemed to be subcoracoid dislocation of the head of the bone. Both of these physicians were struck by the flattened appearance of the deltoid region, and say that the bone distinctly snapped into place during the manipulations which they made. They could subsequently put the

boy's hand on his head and on the opposite shoulder. These positions could not be given the bone before etherization and reduction of the dislocation. The shoulder had still, however, an unusual appearance, notwithstanding the reposition of the luxated bone. The case was accordingly referred to me.

When I saw him the acromion was unduly prominent. The left humerus was apparently half an inch shorter than the right, and the width of the upper end was markedly increased. The greater tuberosity, which could be easily felt, for the boy was not very fat, rotated when the lower end of the humerus was grasped and given a rotary motion. The head of the bone, which I could feel in its normal position, also moved during this manipulation. I felt at times a grating like that of crepitus, but this did not seem to pertain to the humerus so much as to the scapula. It seemed to be in the posterior portion of the joint; but I could make out no fracture of the neck of the scapula, as was suggested by the situation of the grating.

The boy could voluntarily move his arm upward and outward without pain, though these movements were made in a guarded and careful manner, as though he feared suffering. The movements were not very extensive, but showed that the continuity of the humerus was maintained.

Being unable to make a diagnosis without giving pain I etherized him. I then found that rotation of the lower end of the humerus caused similar motion of the head bone, but that if I held the head still with my left hand I could, by means of my right hand holding the shaft of the humerus, cause a bending or rocking motion between the head and the shaft. This movement was between the greater tuberosity and the head. It was apparent that there existed a connection between the shaft and the tuberosity, and also between these portions of the bone and the head; but an antero-posterior rocking motion could be made between the shaft and the tuberosity on one hand and the head on the other. There was no fracture of the neck of the scapula and no dislocation of the head of the humerus.

Three conditions were suggested by these symptoms: First, a firmly impacted fracture at or near the anatomical neck, which allowed the whole bone to move when rotary motions were given to the shaft of the humerus, but which permitted bending between the head and greater tuberosity. Second, a partial or green-stick fracture at or near the anatomical neck. Third, an epiphyseal separation of the head with impaction. The fracture, whether impacted or of the green-stick variety, had permitted the dislocation, which also existed originally, to be reduced under ether by Dr. Fullerton and Dr. Formad. The rigidity maintained at the seat of fracture had been sufficient to permit the head of the bone to be put in place by leverage obtained from the shaft of the bone. The manipulations needed to reduce the luxation were not forcibly made, and the replacement was easily accomplished. Hence, the fracture could not have been produced by these efforts.

The widening of the upper end of the humerus, which was very conspicuous, and the apparent shortening of the humerus, inclines me to the theory of impacted fracture. The age of the child suggested, however, a green-stick fracture as a possibility. By forcible manipulation I obtained complete separation of the fragments. The sensation imparted to my hands was that caused by disentangling or breaking apart two pieces of bone. Subsequently the arm assumed the usual appearance of a fracture of the humerus close to the shoulder-joint. The crepitus originally felt in the vicinity of the scapula was probably due to the rough edges of the firmly impacted fracture rubbing against the border of the glenoid cavity. Having become convinced of the diagnosis, and having restored the proper conformation of the shoulder, I dressed the injury in the usual way—with a small pad in the axilla and a bandage to hold the arm to the thorax, which acted as an internal splint.

Union took place promptly. When I last saw the boy, about eight weeks after my first examination, there was a little unnatural prominence of the acromion, and the head of the humerus seemed to project forward a little more than usual. These appearances may have been due to atrophy of the deltoid. The movements of the joint were perfect.

We shall not need an epidemic of cholera when the new diphtheria antitoxine begins to get in its work.

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SATURDAY, MAY 4, 1895.

EDITORIAL.

CONSENT IN SURGICAL OPERATIONS.

The surgeon is placed in a situation of great delicacy and embarrassment when the family of his patient, or some member of it, offers objection to the performance of an operation, the necessity for which is clearly indicated and recognized by the physician. Especially distressing is it when the patient is a wife and mother, on whose life and health depends the home, and, as is most common and most unfortunate, the objection is raised by the husband. If demanded to save life and the patient is conscious and sane and consents, the operation should be done no matter from what source the objections or who may be the objectors. The husband, by virtue of his position as head of the family, should have the privilege to choose the surgeon. It must not be concluded that he has no rights which are bound to be respected; that the solicitude natural to his relationship should not be honored. It is only where he is governed by selfish motives; where he values his wife but little more than he does his horse; where unreasoning prejudice or extraneous evil influence prompts his opposition, that he should be pushed aside and the welfare and will of the wife alone considered.

Few surgeons are willing to undertake a case where the husband or family prefer that the patient die, or pass into chronic invalidism and life-long suffering, rather than submit to an operation which would save life, increase the chances for ultimate recovery, or even alleviate suffering. For where he encounters such objections, the surgeon not only is subjected to increased anxiety in his surgical work, but he incurs the risk of possible annoyance, perhaps to the extent of pecuniary mulcting. There is too much needy and exacting work ready at hand, responsibility is too onerous, life is too short, to wait and worry and risk in cases where confidence is wanting, capability is unrecognized, where the work and its incident responsibilities are unappreciated, and difficulties and em-

barassments are thrown in the way of its successful execution.

Aside from the feelings of the family are other factors which operate to influence the patient: the talk of neighbors, lineal decendants of the comforters of Job; the gossip, who can give details of the operation and foretell the result—some one she knew told her all about a case somebody had heard some one else relate; the corner druggist, who kindly volunteers an opinion based upon his professional knowledge. Patients have been deceived as to real conditions by men anxious to operate or greedy for large fees. This fact often influences a patient and family, especially where the outward manifestations of disease are not indicative of its gravity. There is an almost irresistible tendancy to wait, in hope that "something will turn up" for the better. The profession in general, recognizes that, in many surgical cases, delay proves disastrous; that if it is not fatal, it results in chronic invalidism and places the patient beyond the possibility of complete recovery. In some cases more or less responsibility attaches to the attending physician who, ignorant of the real trouble or influenced by some questionable motive, discourages operation and even examination by some specialist in the suspected condition.

On the other hand, the surgeon must feel confident of his position. There are errors committed so willfully, selfishly and wantonly, that even that charity which "covereth a multitude of sins" can not palliate them. Surgery, and particularly gynecological surgery, is full of temptations seductive to one ambitious for name and gain; temptations which appeal to many very weak points in human nature. The true surgeon will obliterate thoughts of self and consider the issues of his work. These are momentous, for they deal with human life, with time and with eternity. No man can envy success gained in the way indicated by the dying declaration of a distinguished specialist, operator, writer and teacher, that more than one-half of his operations *were done for money*. The lesson in this confession should sink deep in the surgical mind, and yet deeper into the surgical conscience. When there is less of needless meddlesome operative interference, less of ignorant blundering work done, there will be less of objection raised where conditions indicate the necessity of resorting to surgery.

Legally considered, to justify a surgical operation upon a married woman, her consent and not that of her husband is necessary. A married woman cannot be compelled to submit to an operation; but if she voluntarily submit to its performance her consent will be presumed, unless she was the victim of fraudulent misrepresentation. Even if the disease resulting in death was caused by the operation, the surgeon is not liable if he performed the operation with the patient's consent, in a careful and skillful manner, and under the belief that it was proper to be performed.

The party who allows a surgical operation to be performed is presumed to have employed the surgeon for that particular purpose, and it will be presumed that the operation was carefully and skillfully performed in the absence of proof to the contrary.

A judge of the Supreme Court of Maryland, rendering a decision in a case in point, tersely and aptly states the principle governing in the matter of consent:

"Surely the law does not authorize the husband to say to his wife, 'you shall die of the cancer; you cannot be cured, and a surgical operation, affording only temporary relief, will result in useless expense. The husband has no power to withhold from his wife the medical assistance which her case might require. The consent of the wife, not that of the husband was necessary."

It was said by the Supreme Court of Michigan, in a recent case:

"It would be a cruel rule for her, the wife, if she cannot, in the absence of the husband at least, or in his presence if he does not himself provide for her, make a binding agreement for any necessaries, whether articles to be provided, or professional help. It is not to be expected that physicians and surgeons will always feel bound to render gratuitous treatment to injured persons, and when the occasion s pressing, it would be unreasonable to delay until an absent husband is communicated with to learn whether he consents or refuses to assume her contracts. Time will not allow minute inquiries, humanity will not prompt them. It seems to us that no sensible line can be drawn between contracts for food and clothing and contracts for medical aid."

ABSTRACTS.

THE MANUFACTURE OF DIPHTHERIA ANTITOXINE.*

The discovery of antitoxine as a new agent for the prevention and cure of diphtheria was announced by Prof. Emil Behring, of Halle, about four years ago. Although received at first with more or less incredulity, the new remedy has borne successfully the test of actual use by a number of eminent practitioners in Germany and other countries, several of whom presented reports embodying their experiences and conclusions at the recent international medical conference, in Buda-Pesth, antitoxine now is recognized by all the authorities as one of the most useful and interesting discoveries in modern pathology.

Since the publication of Dr. Behring's treatise on the subject, no secret or mystery has surrounded the nature of antitoxine or the conditions of its use so far as these had then been demonstrated, but, for the reason that its manufacture is difficult and expensive, involving tedious preparation of materials, scrupulous care, and the use of complicated apparatus of production, the new remedy has until quite recently fallen far short of meeting the constantly growing demand, which, especially since the conference at Buda-Pesth, has come with increased insistence from every civilized country where diphtheria is recognized as one of the most fatal and persistent scourges of the human race.

Through the employment of a liberal endowment, raised by popular subscription at Paris, antitoxine has been made there for the supply of the local hospitals, and measurably for the use of practicing physicians throughout the city and immediate vicinity. A small quantity has been produced at Berlin, and establishments for its manufacture are in construction at Milan and Buda-Pesth, but the place where it has been and now is manufactured in quantities at all commensurate with the demand is at Hœchst-on-Main, near Frankfort, Germany.

The material at first used was the blood of sheep and goats, but, for the reason that those animals in grazing were liable to eat plants which might affect the quality of their tissues, recourse was had to horses, which now are employed exclusively to furnish the blood-serum in which the antitoxine is developed and contained.

A description of this interesting manufacture involves necessarily some account of the nature of antitoxine and the principle upon which its prophylactic action depends. Dr. Behring found that when an animal by nature susceptible to diphtheria was inoculated repeatedly with gradually increased doses of diphtheria poison it became finally immune to the poison of that disease, and there was developed in the tissues of the animal so tried an antitoxine principle which had the power to neutralize and render innocuous the poison which was secreted by the

*From the official report of Consul-General Mason, at Frankfort, Germany, to the U. S. Government.

diphtheria bacillus, as demonstrated in 1884 by Lœffler—the poisonous secretion, as is well-known, forming the source of danger in diphtheria.

The neutralizing agent thus created is named antitoxine, and is the specific which forms the basis of the new treatment of diphtheric diseases, both as a preventive and as a remedy in cases that actually have been developed. Precisely what this antitoxic agent is has not been demonstrated. Chemistry has not separated and defined its constituent elements, but its action is perfectly understood as analogous to that of hydrated oxide of iron when used as an antidote for arsenical poisoning. In the presence of arsenic the oxide unites with the poison and forms a combination which is not poisonous. In a smaller manner the antitoxine attacks and neutralizes the poison secreted by the bacillus of diphtheria, and this, so far as experience has shown, without subsequent injury to the tissues or prejudice to any of the functions of human life.

Antitoxine may be obtained in a highly concentrated form by either of two methods: First—Through precipitation from the serum solution by means of sulphate of ammonia or hydroxide of aluminium, and in this case the resulting precipitates are mixed with alkaline solutions and evaporated in vacuo at low temperature. Second—The original solution may be evaporated directly to dryness, leaving the dessicated antitoxine as a residue.

The essential conditions in the preparation of diphtheria antitoxine are absolutely pure and healthy animal serum, thorough knowledge of bacteriological processes, absolute cleanliness and care at every stage of the operation. The horse is one of the most susceptible of animals to diphtheria, and, being not only tractable and easily kept under requisite conditions, but capable of supplying a large quantity of blood, is best suited for the purpose. The horses now in service at Hœchst were chosen with every precaution—the requisites being youth, vigor and perfect physical health.

No racing thoroughbred was ever housed, fed, watered, exercised and cared for more scrupulously than these chosen animals which give their blood for the healing of human kind. The stables are under the supervision of a veterinary surgeon, and when a new horse is introduced he is kept for a period under close observation to detect any symptom, however slight, of antecedent injury or disease. If no such defect is discovered, he is put on the active list, his stall is numbered, and a special book is open for him, in which every detail of his daily treatment and condition is carefully recorded.

He first is inoculated high up on the shoulder with a small or weakened dose of diphtheria poison of living bacilli. Thus far his temperature is frequently taken, and his appetite, his general aspect, the condition of the wound made by the hypodermic syringe, etc., are minutely observed and recorded. After the proper interval the inoculation is repeated in gradually increased doses, until the horses become immune to the poison of diphtheria. Every tissue of the animal's body now contains antitoxine, but the blood is the substance which most readily can be withdrawn without injury to life and health, and the blood alone is used.

It is important to ascertain definitely when the treatment of each animal has been continued sufficiently to render it immune and fully developed of antitoxine in its tissues. This is done by drawing a small quantity of its blood, separating the serum, and mixing this with a specified quantity of the diphtheria poison, such as otherwise is used for inoculation. With this mixture a test animal—usually a rabbit or a guinea pig—is inoculated, and the result is observed. If the test animal becomes ill from diphtheria, it is proved that the antitoxine in the horse's blood was not sufficiently developed to neutralize the requisite volume of poison, and the inoculatory treatment is therefore resumed. But if the test animal shows no ill effects the potency of the serum is thereby established and the horse is ready to become a producer of antitoxine.

The amount of blood that a strong, healthy horse can supply without apparent injury to its physical condition is somewhat surprising. Record books at Hœchst show that from one of the horses 10 liters (21.13 pints) of blood have been drawn within two days; another has yielded 21 liters in eight days, and the average for each animal varies from 25 to 50 liters a month. All have at present the appearance of good health, and some have even grown fat under the ordeal. Dr. Behring, who has drawn blood from the same horse

for nearly four years, states that it is in good physical condition.

The blood thus obtained passes to the laboratory, where the serum is eliminated, exposed to a degree of heat which destroys the last vestige of any form of bacillus that it may contain, and then is prepared for use by processes, a description of which would extend unduly under this report. As a final precaution against the survival of any bacillus, and to avert danger of decomposition from bacterial growth, 5 per cent. of carbolic acid is added to the antitoxine serum, and in this condition it may be kept in a cool place, with exclusion of light, for months without the loss of much antitoxic power.

Horses vary individually in respect to the strength of the antitoxic serum they produce, and the finished product is prepared in three degrees of strength, numbered respectively, 1, 2 and 3, which are indicated by different colored labels on the vials in which it is sold for use. In the use of antitoxine, either as a prophylactic or remedy, the strength of the serum employed is a point of importance to the physician, who should know precisely the antitoxic energy of the dose administered. It was, therefore, necessary to formulate a system of measurement for this energy based upon a definite and invariable unit. This has been done mainly through the labors of Drs. Behring and Ehrlich as follows:

The bacilli of diphtheria are propagated in bouillon. The amount of such poison that a given measure of bouillon will contain is fixed and definite like the limit of saturation in many saline and other solutions. The deadliness of this maximum solution of diphtheria poison may be inferred from the fact that one-fourth of a cubic centimeter of it administered hypodermically will kill a guinea pig of 250 grammes weight. The relative strength of this normal bouillon toxine and the antitoxine is as ten to one—that is to say, one measure of antitoxine will neutralize ten measures of *Normangift*, which is the German name for diphtheria bouillon. The standard strength and the energy contained in one cubic centimeter (one-thirtieth of a fluid ounce) of such antitoxine forms the unit of measurement of antitoxic power.

But some horses yield far more powerful serum than others, and the serum may be produced so powerful that one-tenth of a cubic centimeter of it will neutralize ten centimeters of poison. One cubic centimeter of such serum would thus contain ten units of antitoxic power, and would be designated as "tenfold serum." The strongest serum yet produced is "140 full," one measure of which neutralizes 1,400 measures of the normal toxine solution.

The finished antitoxine is a clear, amber-colored fluid, soluble in water, and is put up for use in strong, carefully closed, sealed and labeled vials, having a uniform capacity of ten cubic centimeters, or one-third of a fluid ounce. The exact bulk of serum in each vial is regulated according to its number and strength, as follows:

Antitoxine No. 1 (green label) contains 600 units of antitoxic energy, and is used in mild cases and for young children, or as a preventive to inoculated children or adults who have been exposed to diphtheria, but are not yet attacked visibly. The prophylactic power of antitoxine is estimated at ten times its curative virtue, so that a subcutaneous injection of one cubic centimeter of serum No. 1 is generally regarded as sufficient to avert diphtheria.

Antitoxine No. 2 (white label) contains 1,000 antitoxic units, and is used for older patients and where treatment has not been commenced until the attack is fully developed.

Antitoxine No. 3 (red label) contains 1,500 units of strength, and is employed for severe cases where malignant symptoms prevail and treatment has not begun until the disease has reached a critical stage.

It is more than probable that with further experience the importance of the highest of these three grades of serum will be diminished greatly, and instead of one injection of highly-concentrated antitoxine, repeated doses of the weaker quality will be preferred. The principle has been fully established that the requisite number of antitoxic units can be supplied, even in severe cases, by simply repeating the injection of serum No. 1—in other words, it is quantity, not quality of strength, that is required, and Prof. Behring is of the opinion that ultimately only one serum of standard and uniform strength will be used.

It also has been found that age has as

important salutary effect upon antitoxine. In the earlier experiments, when the supply of antitoxine was small and temporary, freshly-prepared serum was mainly used, and produced in some cases a slight eruption of the skin. This was the outward sign of a disturbance, the ultimate consequences of which caused some fear, but later experience has shown that this eruption is not caused when serum which is ripened a few weeks is used. Instead of degenerating, antitoxine improves with age, at least during the first two months, and the best German practitioners no longer use freshly-prepared antitoxine when that which has undergone the ripening process can be obtained.

All authorities agree that an early application of the remedy is of the utmost importance. At the Lazarus Hospital, in Berlin, where 72 cases of diphtheria in children were treated within 2 days of first appearance, only 2 cases were fatal, and Dr. Kossel estimates that in such favorable conditions the death rate can be reduced to 4 per cent. It follows from the nature of antitoxine that it can have no curative effect in cases of any disease other than diphtheria such as are caused by the Loeffler bacillus, and no exact and conclusive statistics can be prepared until such cases are carefully distinguished from scarlatina and the other kindred diseases in which the real diphtheric bacillus is not present.

Only the careful experience of years by a large number of physicians can settle definitely all the questions that have been raised by the introduction of antitoxine; so its precise value as a preventive or remedy, in determining finally whether its use when properly prepared and administered entails any danger or injurious effects upon the patients, although inconclusive from a scientific standpoint, is certainly most important.

SOME PRACTICAL POINTS IN OBSTETRICS.

Crow, in the *Virginia Medical Monthly* gives the reasons which have led him to adopt the following routine as regards antiseptics in obstetrics. While it was not the result of scientific bacteriological investigation, but purely that of practical results obtained in the treatment of about eight hundred cases, it is nevertheless, in accord with the results of our scientific investigators, namely:

1. If the patient tells him that she has no abnormal secretions from the vagina, then he advises a plain douche of hot soft water at the beginning of labor.

2. If she has an adnormal secretion, then he advises a douche of hot water, carbolized, once or twice a day prior to expected confinement.

3. If the secretions are profuse and irritating to the parts, then he advises a local treatment as a means of relief, in connection with the carbolized douche.

4. A five per cent. creolin solution he finds the best antiseptic lubricant for the hands of the accourcheur at the time of confinement.

5. He uses a dressing of boric acid on absorbent cotton over the vulva, changing it whenever the cotton becomes saturated, and then bathes the external parts with some warm antiseptic solution.

6. He neves advises a vaginal douche for the first week or ten days after labor in normal cases with no rise of temperature.

7. He tries to impress upon the nurse the importance of thoroughly cleansing her hands before attending the patient.

Even with this treatment arrest of flow, rise of temperature, etc., sometimes occur, probably due to undue exposure of the patient and using water of too low a temperature in bathing, and lack of proper cleanliness on the part of the nurse, especially in families where the nurse in attendance has to be cook, washerwoman, housekeeper, and attend, perhaps, to the numerous wants of older children, etc.

It should be remembered that nature does a great deal in throwing off the material for sepsis to take hold of; and too much interference with the mother in the way of douches and washes repeated too often during the first few days is harmful, for it breaks her rest and adds to the already high tension of the nervous system, which is altogether unfavorable to the normal restoration of the functions.

THE DISINFECTING POWER OF SOLAR RAYS.

Certain articles, as furs, leather, etc., cannot be disinfected by steam, since they are thereby rendered useless. Others, which are certainly amendable to such treatment, as fixed upholstered articles of of furniture, cannot be removed for the purpose. To disinfect these we have recourse to gaseous agents, and they, according to the results of experiment, are not always reliable. An exception possibly lies in formalin, which has recently been recommended by Lohman (Munchener *Medical Wochenschrift*). Another means of disinfecting such articles consists in the use of solutions of carbolic acid or corrosive sublimate. In the case of wooden and metallic articles, with smooth hard surfaces we can rely on the result, if they are first thoroughly sprayed with the liquids and subsequently washed, but such is not the case with thick woolen materials. Duclaux, (*Review Scientifique,*) found that some bacteria are destroyed by sunlight, and he refers to this as an important agent in the sterilization of the atmosphere. Arloing (*Compt. Rend.*,) proved that anthrax bacilli are destroyed by the solar rays. Koch has also shown that tubercle bacilli cannot be exposed to the same for very long and survive. Fermi and Celli (*Centralblatt f. Bacteriologie*) in a series of experiments, demonstrated that germs in aqueous suspension are likewise killed, and Baspe (*Dissertation Schwerin*) asserts that the sun is able to hinder the development and even destroy bacilli lying on the surface of the soil or submerged in water. But no experiments have been hitherto made to determine how far these rays may be used as disinfectant of clothes, bed linen and furniture.

It is common custom to expose the clothes, bed linen and mattresses to the air and sun, especially after death, possibly in the hope that currents of air may diffuse evil odors more quickly. Nevertheless, it seemed of importance to the author to investigate how far such results were trustworthy, and how far they were attributable to the direct effects of the solar rays.

Esmarch used pillows, varying the contents, skin, etc., and bacteria, as pure cultures, or pus containing micrococci. He imitated the natural conditions as far as possible. The materials were contaminated with the solutions placed in the sun, either at once or after drying. Control experiments were made. He arranged wool, cloth, etc., in layers, and in the first series of experiments to prevent the falling of atmospheric microbes during the exposure, he placed the pieces in a box covered with a glass pane, and provided at the sides with openings for ventilation. The temperature of the interior, however, rose much higher than that of the air (30°) and vitiated the results. In subsequent experiments the objects were always placed on the grass in the sun. Esmarch concludes that the sun's rays have a marked action on the surface, but that this speedily becomes lost when bacteria are protected by layers of material. The cholera bacilli, even in the deepest layers, were killed; but this is not surprising since dessication, lasting but a short time, is fatal to it. An exposure, lasting eight to ten hours, yielded but unsatisfactory results. After one day she diphtheria bacillus was killed in the interior of the pillows, but when protected by the woolly hair of a sheep's skin, 39 hours were insufficient. Streptococci within the pillows, and the skins withstood a five days' exposure. Esmarch then sprayed infected articles with two per cent. and five per cent. solutions of carbolic, and found that the weaker acid is little better than the sun, and that five per cent. is not altogether reliable. (Ueber sonnen desinfection. E. Von Esmarch, *Zeitschrift f. Hygiene.*)

The Value of Diphtheria Antitoxin.

The discussion on the value of the diphtheria antitoxin at the Berlin Medical Society, was concluded at the third session of the society. *Med. Rec.* Dr. Schiemmann warned general practitioners against employing the antitoxine, which he said should be left to hospitals for the present. Professor O. Liebreich, director of the Pharmacological Institute of the University, criticised the published serum statistics. He said that the Berlin hospitals had always had a much higher percentage of deaths from diphtheria than the Berlin town practice. This was because, broadly speaking, only serious cases were brought to the hospitals.

THE TREATMENT OF TETANUS BY ANTITOXIN.

A successful case of tetanus treated by antitoxin is reported by John Marriott, M.B., in the *British Medical Journal* for January 19th. The symptoms began six days after the injury—a wound in the jaw caused by a missile from a catapult—with inability to open the mouth and difficulty in swallowing.

On the ninth day, when the patient was first seen by Marriott, the muscles of the neck and back were stiff and prominent, and there was well-marked trismus. Disinfection of the primary focus, administration of chloral, as much as could be swallowed, and physostigmine (one-one-hundredth grain) hypodermically during the next two days did not relieve the symptoms, which became gradually more aggravated, until on the fifth and sixth days there was slight opisthotonos. Two and one-half grammes of Tizzoni's antitoxin were now given hypodermically, the necessary punctures causing strong opisthotonic spasms. On the next day, the thirteenth of the disease, the patient was able to swallow a little. One gramme of antitoxin was given. The following day swallowing was easier. Speech was unintelligible, but the patient could make himself understood by writing in large jerky scrawls; one-half gramme of antitoxin was given. During the following days gradual improvement was noted, one-half to one gramme of antitoxin being given daily until the twenty-first of the disease, when none was administered. The jaws at this time were still clenched. On the twenty-second day of the disease, early in the morning during sound sleep, the jaws opened sufficiently to allow the tongue to protrude and when the patient woke the tongue was caught and firmly held. The irritation caused renewed spasms, embarrassment of respiration, cyanosis. Attempts to administer chloroform only made matters worse. Although the patient appeared to be dying, one-half grain of morphia with one-fiftieth of physostigmine was given with success in causing relaxation of the spasm and release of the tongue. Recovery from the morphia was followed by a return of the spasms, which were successfully combatted by antitoxin. The case progressed to recovery, and the patient was able to sit up on the thirty-fourth day.

The second case, which terminated fatally, was one of tetanus neonatorum, treated by antitoxin. The child had been delivered by a midwife, and the disease appeared on the eighth day of life. On the fourth day of the disease it was first seen by Dr. T. Lacy Firth, who reports the case.

On the fifth day of the disease there was jaundice, the eyes were tighly closed so that the lids could not be opened. The jaws were set and the neck and spine rigid. The child could be held in a vertical position by holding the legs only. A part only of the milk introduced into the mouth was swallowed, and the attempt produced cyanosis and short feeble cries. Nutrient enemata, chloral and bromide constituted the treatment.

On the seventh day an alarming collapse took place, but passed off. Similar attacks followed on succeeding days. On the tenth day there were eight of these attacks and the child died in the evening of this day.

On the eighth day of the disease four-tenths of a gramme of antitoxin was given subcutaneously, and during the ninth day two injections of the same amount were given.

On the tenth day eight-tenths of a gramme was given at one dose. The total given thus was two grammes.

In the *Quarterly Medical Journal* two cases of traumatic tetanus in adults are reported, both successfully treated by antitoxin. The antitoxin treatment was begun on the ninth and third days of the disease, respectively. In both these cases repeated doses of the antitoxin were required, and improvement in the symptoms followed each dose.

It is interesting to note that in the last case, a child of six, a rash resembling measles with fever and swelling of the cervical lymphatic glands appeared on the twelfth day after the discontinuance of the antitoxin.

That a similar rash has been often noticed after the antitoxin treatment of diphtheria is interesting, and points to the fact that the rash may be due to the serum

itself and not to the particular antitoxin it contains. The failure of the serum in the case of tetanus neonatorum cannot be considered as indicating its unreliability, when we consider that the eighth day of the disease in a new-born child is a much later period with reference to effective treatment than it is in an adult. The possibility of complications, as suggested by the jaundice and attacks of collapse, which are not usually symptoms of tetanus, is present. Unfortunately no autopsy was allowed.

In the light of these cases, and in view of the widespread reports of the success of antitoxin in diphtheria, we think the time has come when public authorities should take into serious consideration the general problem of assuring to the profession and to the public reliable sources of supply of such antitoxins as are proved by sufficient and careful experience to be curative.

FREE BLOODLETTING IN PUERPEPAL ECLAMPSIA.

D. Dwyer, M.D., writes to *New York Medical Journal:* On Friday, November 2, about 9 P.M., I was called to see Mrs. J. M., who was, as she supposed, about to be confined. On my arrival at the house I found her in bed, apparently quite comfortable. The first thing which I did, of course, was to make an examination. From this I concluded that the labor had not at all begun, and by the way, previous to my arrival, she had had no pains other than some stomach irritation. I could find no dilatation of the os, and was about to leave and return to my office after having remained about an hour, when she suddenly complained of dimness of vision and in a very few moments complete blindness. I anticipated the future, as we all, as practitioners of medicine, know what this means.

It was only a very few moments until she went into a convulsion which, indeed, was very severe. I could do nothing, only keep the teeth apart at the next. However, I had my chloroform ready and administered it in the usual way, and I am sorry to say with little effect. I remained at her bedside till 5 the next morning, when I left and returned to my office te see if I could find anything in my library that would enlighten me on the subject, and there, as Professor Ford, of the University of Michigan, used to say, "I succeeded in failing."

It was utterly impossible to get my medicine into the stomach, for she was unconscious from the first convulsion until we resorted to bloodletting. The convulsions came on every fifteen to twenty minutes. On the next morning, about 8 o'clock, I called Dr. Blackslee in consultation, and on making an examination we found the os considerably dilated.

What, then, were we to do? We tried injections, but they were of no avail. We then, as the heading of my article indicates, resorted to free bloodletting. We opened the median basilic vein and drew therefrom a quart and half a pint of blood. We had no sooner done this than the patient regained consciousness and was immediately delivered of the child, which in our opinion, was at about the seventh and a half or eighth month; it lived four to five hours. The woman got along very well with medication. As soon as she would take any, we gave diuretics and cathartics.

This I consider a rare case on account of the extreme amount of albumin in the urine.

Seborrhoic Eczema in Children.

Feulard, (*Brit. Medi. Jour.*,) observes that attention must be given in the first place to the diet, which should be limited to milk, with the addition, in older children, of eggs. In the local treatment the first step is the removal of crusts, which may be effected by using warm coal tar lotions, preceded, if necessary, by poultices. After the crusts have been removed he uses gauze compresses soaked in a solution of resorcin (6 in 1000). These are kept constantly applied to the scalp by day, and are applied frequently to the face. By night an ointment is used, consisting of one part of balsam of Peru to thirty parts of vaseline. Later he uses fine starch powder, or a powder consisting of equal parts of starch and carbonate of bismuth.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Hydrosulphate of Calcium and Protosulphide of Barium as Depilatory Medicaments.

The depilatory action of the hydrosulphate of calcium and of the protosulphide of barium has been studied by Annequin (*Archives de Med. et de Pharm. Militaires*). The sulphydrate of calcium is an unstable body, losing its sulphydric acid under the action of carbon dioxide, and in the presence of air it is slowly oxidized. The odor of sulphydric acid may be masked by a combination with some aromatic essence, such as peppermint, bergamot, etc., in the strength of one to two per cent. Calcium sulphydate, locally applied in the form of a paste made with water, has caused the softening and detachment of a finger-nail in about an hour, and in two hours that of a toe-nail. A longer time is required to produce a similar effect on horny growths or corns. A growth about five millimetres (one fifth of an inch) thick has been destroyed in about twelve hours. The action of the medicament is enhanced if the growth or corn to be treated be previously subjected to a sort of maceration. Many other alkaline sulphydrates and sulphides associated with a caustic base have a destructive action similar to that of the sulphydrate of calcium, but they affect the roots of the hair and prevent the growth of this; hence the superiority of the calcium base. This does not injure the dermis nor the hair-roots, and its action is rapid and painless. Next to this body, the best depilatory agent is said by the author to be the protosulphide of barium. The application of this substance is also very simple. A layer of the paste is applied to the part to be treated, and in about from six to seven minutes all the hairs are destroyed. The barium protosulphide is superior to the calcium base, in that it is odorless, more rapid in its action and cheaper. It causes a slight smarting, which only lasts a short time. This latter effect may be diminished by associating the medicament with oxide of zinc, but under these circumstances the rapidity of action is lessened. The protosulphide is the only sulphide of barium, so it is asserted, that exercises a depilatory action.

Raynaud's Disease With Complications.

The following account of a case of this rare condition is given by T. K. Monro (*Glasgow Medical Journal*): The patient, a girl, when first seen was twenty months old. She had marked hydrocephalus. There was a striking discoloration of the skin, which was said to have been present at birth, and at one time had existed over the whole body. Cold and crying rendered the discoloration more conspicuous, while heat rendered it less so. At present there are blue mottled patches on the face, legs and arms, and the back. There was extreme lividity or actual gangrene of portions of the extremities, especially of the second left toe and of the second right toe. Apparently there was little or no pain.

The patient was again seen five and a half months later, and two months after that, there being at both times a slight improvement. Three weeks later she was decidedly worse, owing probably to the cold weather; and a slight swelling immediately above the sterum was noticed on crying, which proved to be a diverticulum of the trachea, and a vertical slit in the wall of the trachea could be felt. She now suffers considerable pain, and is constantly crying. A dark-blue, almost black, spot is commonly present on each cheek. The reddish color is well marked on the hands and wrists, the back and the hip. The second toe of the left foot is decidedly worse, and viewed from above the distal half is of pure blue (not black and not purple) color. The plantar surface is almost entirely blue. There is no blackness on the right foot, and there has never been any on the fingers. Nothing abnormal has been detected with regard to the heart, and the urine contains no albumin, no blood and no sugar. There is no clubbing of the fingers, no muscular palsy or wasting, and no loss of sensation or swelling of the joints. There is no fever, no uticaria and no scleroderma.

The Use of Antipyrin in Large Doses.

One case of hysterical fits and two cases of chorea are reported by McCall Anderson (*British Medical Journal*) to show the good effects of antipyrin administered in large doses. According to the writer, antipyrin is the most valuable of all the coal-tar derivatives. The initial dose should not exceed ten or at most fifteen grains. When this quantity is well borne it should be increased cautiously to forty and even fifty grains three times a day. The author concludes that:

1. Antipyrin is not the dangerous drug which some observers have led us to suppose.
2. It may be given in safety in large doses, even in the case of children, in most cases, although the initial dose must be small, and it must be slowly and cautiously increased, the patient being always carefully supervised.
3. In large doses it often yields surprisingly good results, and in chorea it is the only medicine from which cures may confidently be anticipated.

Breakfast for Chlorotic Girls.

Dr. Carl Van Noorden, in the *International Medical Magazine*, speaking of the dietetic

treatment of chlorosis, says: "Most chlorotic girls feel the weakest and worn out most during the hours of the forenoon and incapable of any proper kind of work. This condition is uncomfortable and directly harmful, from the educational point of view. The best remedy is the English fashion of a good hearty meal at the beginning of the day. Chlorotic girls are advised to drink half a litre of milk of the best quality while still in bed, and do it very slowly, taking fifteen minutes to drink the quantity prescribed. Half an hour later they should rise and be rubbed with a dry, rough woolen towel. Then comes the breakfast, consisting of a small cup of tea, one or two slices of buttered toast and plenty of meat. Two hours and a half later some bread and butter is to be eaten, together with two eggs, this to be followed by a quarter of a litre of milk. A glass of sherry is now permissible if special reasons warrant it. This morning regulation or diet makes the forenoon hours quite comfortable. Fixed rules for other meals are of less importance."

The Care of the Ear During the Course of the Exanthematar

Dowine (*Journal of Laryngology, Rhinology and Otology*), says that two-fifths of all middle-ear cases examined by him originated during the course of measles and scarlet fever; but this does not indicate the number of cases in which the ear is affected during these diseases, but rather points to the proportion of chronic ear affections which follow them. Many acute cases prove fatal; while others, on account of their acute character, have active treatment applied early, by which structural changes are prevented For relief of nasal discharges the patient should be directed, from the very beginning of illness, to use the handkerchief freely; and if the child is too young to do this, Politzer inflation should be resorted to. Where the case does not come under observation till a late stage, and the pain in the ear is acute, and relief is not obtained by inflation, the membrane should be examined and incised without delay, especially if there be a sudden rise in temperature without any other explanation. This operation is of incalculable benefit to the patient, for it not only relieves the immediate pain, but saves the deeper structures of the ear and prevents the misery of a chronic otorrhœa, with its numerous attendant risks.

Hypodermic Injections of Pilocarpine in Meniere's Disease.

These cases were treated by Labit, in Moure's clinic at Bordeaux (*Rev. de Laryngol., d'Otol., et de Rhin.*), and occurred in a governess aged sixty-eight, a stoker aged forty-nine, and a female cook aged twenty-eight. The first had previously been affected with sclerotic catarrh of both middle ears; the others were quite free from any aural disease of the kind, but were, from the nature of their occupations, exposed to extreme heat. In all there were the typical symptoms—noises, vertigo, nausea or vomiting, and deafness to osseal as well as to aerial sound vibrations. In the second case one ear only was affected. The first received fifteen injections of from $\frac{1}{4}$ to 1 centigramme (about $\frac{1}{75}$ to $\frac{1}{15}$ grain), the second thirteen of from $\frac{1}{2}$ to 2 centigrammes (about $\frac{1}{15}$ to $\frac{1}{3}$ grain), and the third eight of from $\frac{1}{4}$ to $1\frac{1}{2}$ centigrammes (about $\frac{1}{75}$ to $\frac{1}{4}$ grain), continued and increased. In all the cases the vertigo disappeared, the noises diminished, and the hearing was to a certain extent restored. The writer compares the absorption produced to that observed in pleural and peritoneal effusions under the action of pilocarpine. Success depends upon the correctness of the diagnosis and the early adoption of the treatment.—*Brit. Med. Jour.*

Clinical Value of Renal Casts.

Many clinicians can recognize casts under the microscope but fail to interpret their significance. Dr. A. E. Austin, in the *International Med. Magazine*, separates them into definite groups and draws inferences accordingly. The hyaline and blood casts merely indicate irritation and hyperemia. Closely associated with hyaline casts is amyloid change of the kidney due usually to suppuration, and with a good prognosis if the source of suppuration be removed. Epithelial, granular and fibrinous casts indicate acute inflammation of the renal tubules, the epithelial cast pointing to the mild stage; that is, one of mere desquamation with urine slightly under normal in amount, specific gravity 1,030, high color, albumen a trace, numerous hyaline casts, free blood and renal epithelium. This may go on to brown or pale granular casts with diminution of the solids of the urine. The fatty and waxy casts when numerous and persistent indicate long-continued chronic inflammation of the kidney with bad prognosis. Blood and epithelial cells are absent. In this case the urine is diminished in amount with increased specific gravity. The pale, granular and small hyaline casts point to fibroid kidney. Aside from the microscopical appearance, the general condition of the patient, age, sex and previous history must be taken into consideration. It should be remembered that the diagnosis of cases alone may mean little, but the kind of casts in abundance is the important point.—*Maryland Med. Jour.*

Gold Mines in Cemeteries.

A writer in *Le Temps*, of Paris, has been traveling in America, and, of course, relates his "impressions." What struck him particularly was not the Falls of Niagara, the inquisitiveness of reporters, or the consumption of pie, but the fillings in American teeth. He has consulted the statisticians and finds that the amount of gold annually pounded into our dental cavities reaches the respectable figure of 800 kilogrammes, representing a value of half a million dollars. All this precious metal is buried with the Yankees

when they die, and consequently at the end of three short centuries the cemeteries of the United States will contain gold to the value of $150,000,000. He thinks this will prove too tempting to the practical mind of the future American, and foresees the day when companies will be organized to mine the cemeteries and recover the gold secreted in the jaws of deceased ancestors.

SURGERY.

Effects of Castration on the Female Voice.

The author, Moure, (*Univ. Med. Jour.*) calls attention to the effects of castration in in the male upon the voice, and to the physiological relations between the pharynx and the genitalia. He also narrates two cases of women who, after the removal of the ovaries, showed a marked lowering of the timbre of the voice, which, at the same time, became much stronger. He does not believe that such changes are constant, nor that it is easy to recognize them when they actually do occur, except in vocalists, and especially in the soprano with a high range. It is well known that castration, after a certain age, has no effect upon the larynx.

[We believe that in the latter remark is suggested the gist of the whole matter. Castration after puberty in either sex, probably has no effect whatever upon the voice. We know of one instance—a young married woman of thirty, with a fine voice—who after removal of both ovaries, found her vocal ability unimpaired].

Primary Carcinoma of the Body of the Uterus.

The last meeting of the Obstetrical Society was a specially interesting one. After Mr. Targett's demonstration of hydatid disease of the pelvic bones, consisting of numerous photographs thrown on the screen showing the peculiar eroding effect of the disease on the cancellous tissue and—a point of morphological importance—the external budding of the secondary cysts from the walls of the parent one, Dr. Lewers related a case of primary carcinoma of the body of the uterus in which vaginal hysterectomy had been performed more than two years ago without any recurrence of the disease. Five other cases were also tabulated. In cases of doubtful diagnosis Dr. Lewers justified the complete investigation of the uterine cavity by dilatation of the cervix, rather than the usual method given in text-books of waiting for the development of symptoms, so that the disease might be dealt with at the earliest possible period. The difficulty of extracting the uterus in nulliparous women, in whom carcinoma of the body is most frequently met with, was specially noticed. In the case described, it was necessary to widen the caliber of the vagina by incision of the recto-vaginal septum, and bring away the excised uterus by means of a pair of forceps devised by Dr. Heywood Smith, resembling small midwifery ones. Dr. Lewlers now adopts pressure forceps instead of ligatures for securing the broad ligaments. This formed a subject of discussion among the subsequent speakers, some expressing a decided preference for ligatures.—*London Lancet.*

Treatment of Fistula in Ano.

Dr. Geo. J. Cook, in *Mathews' Medical Quarterly*, says that ingenious surgeons in all ages have tried the cure of fistula without the use of the knife, because of the public prejudice against such radical procedure. Plasters, salves, ligatures and the many other methods for a cure have been resorted to, and it is only in the very recent past that the use of the knife permanently took their place as a curative measure certain in its results. The method of operation is as follows:

The sphincter is stretched, the rectum cleansed with a bichloride of mercury solution, and the fistula opened by the use of straight scissors; after the removal of all unhealthy tissues, the opening should be closed by a single row of catgut sutures, passed, by means of a curved needle, entirely beneath and around the wound. By this method he had not failed in a single instance to have the bottom of the wound unite.

Hemiplegia Cured by Trepanation.

The following case is a striking example of the progress of cerebral surgery, especially after so many years of the original injury. The case is reported by Leyden to the Berlin Medical Society, as follows:

A man thirty years of age is brought to the hospital in an unconscious state with hemiplegia. When consciousness was restored it was ascertained that for two years he was subject to Jacksonian epilepsy with loss of consciousness, which lasted about ten minutes, and reappeared three or four times a year. A fortnight before his entrance into the hospital he was attacked by violent cephalalgia on the left side, accompanied by somnolence and a state of stupor; the left side of the body became very feeble and was finally completely paralyzed.

It was also ascertained that at the age of four years, *i. e.*, 26 years before, he fell from a stairs and had his head injured. As a consequence, the diagnosis of Jacksonian epilepsy of traumatic origin, was made. In fact, on examining the patient there was found on the right half of the head near the median line, a depression which corresponded to the region of the central convolutions. Hence, trepanning was done, which showed nothing abnormal on the part of the brain. The wound was closed, and fifteen days later the patient was cured of his hemiplegia. The epileptiform attacks have not reappeared during the last four months. —*La Tribune Medicale.*

Aseptic Drainage Tube.

Dr. J. H. Kellogg (*Modern Medicine and Bacteriological Review*) calls attention to the fact that in drainage after abdominal operations, infection may occur through the entrance of air into the abdominal cavity in the process of removing fluid from the drainage tube by means of the evacuating syringe. To prevent this, he first devised what he terms an aseptic drainage tube, which he so arranged that the air which rushes in to take the place of the fluid withdrawn has been first filtered by passing through cotton and then washed by passing through an antiseptic solution. More recently he has simplified this devise by inserting into the drainage tube a hollow aluminum plug over which is slipped a thimble, connected with two tubes, one of which is attached to the evacuating syringe, the other to a funnel filled with absorbent cotton and covered with sheet lint. The wound should be dressed with guaze impregnated with a powder composed as follows:

Camphor	1 part.
Carbolic acid	1 part.
Boric acid	16 parts.

For the purpose of washing out the abdominal cavity subsequent to closure at the operation, it is only necessary to remove the filtering funnel by disconnecting it from the plug to which the funnel is attached and substituting a tube of proper length, the other end of which is made to dip into a solution of boric acid or whatever antiseptic may be employed. It is, of course, necessary to fill the tube with water before connecting it with the plug so that any unsterilized air which it might contain will not be drawn into the abdominal cavity. This appears to be a useful device, well worthy of professional attention.

Sprains and their Appropriate Treatment.

Primrose (*Canadian Practitioner*) holds that the aim of treatment for sprains is the early absorption of effused material and the prevention of adhesions. For the immediate treatment of a recent sprain pressure is of paramount importance. This should be applied as follows: The joint—say the ankle, for instance—is placed at a right angle (or, if possible, at less than a right angle) with the leg, then cotton-wool or ordinary cotton batting is applied evenly over the foot from the toes upward to the middle of the leg. The amount of wool must be considerable, loosely applied, it should be fully three inches in depth. Over this is applied the bandage from the toes upward, which is drawn as tight as possible. There is no danger of making too much pressure, provided there is sufficient cotton wool. This usually alleviates pain immediately by affording pressure to the blood-vessels and keeping the part at rest. The bandage and wool are removed at the end of a few days, a week at the longest, and carefully instituted passive movement is employed; then the dressing is reapplied to prevent further effusion. In ten to fourteen days cotton wool may be dispensed with and the support of an ordinary flannel roller substituted. The patient is able to use the injured joint for ordinary purposes after the lapse of about three weeks in the majority of severe sprains. In sprains of slight severity massage may be begun at once with excellent results, and in old sprains massage is by far the most appropriate treatment and indispensable in order to effect a cure. Heat and cold are at best temporary methods of relieving congestion, and do harm if employed to long.

Vaccination by Scraping a Defective Process.

Ortega, (*Bull. Glende Therapeutique.*) The author, who practices medicine on the frontier of Mexico, states that he has observed that most of the North American people are vaccinated by this process, and that a great number of the latter, although bearing a large and deforming cicatrice, contract smallpox, or can be successfully vaccinated by puncture. On the contrary, among those vaccinated by puncture very few suffered from the contagion, while revaccination was only successful in a few cases.

As these observations were made on both Mexicans and Americans, the author concludes that the race has no influence on the receptivity, and that vaccination by scraping or scarifying increased the chances of the introduction of the germs of suppuration, which although they produce inflammation and cicatices, have nothing to do with vaccine, which they destroy; while, with the puncture made on various places, a very slight opening is offered for the accessory inflammation, and the virus of vaccine has more chance to develop. The vaccination by puncturing is very seldom followed by those large inflammations which accompany too frequently the other mode of inoculation.

The process of vaccination by puncture is recommended by the New York Biological and Vaccinal Institute, but it is well to add that on account of the very slight incision made in the integument, the quality of the virus must be as near perfection as possible.

Indications for Plaster of Paris Jacket.

Dr. B. F. Wooding, *Denver Medical Times*, says: A plaster of Paris jacket is indicated in all cases where a fixed supporting dressing is needed to hold the vetrebral column in as near a normal position as practicable, whether the deformity is caused by a fracture or some active pathological changes taking place in the bodies of the vertebræ.

The most frequent use of the plaster of Paris jacket will be found in treating abnormal curvatures or angular deformities of the spinal column, produced by a so-called Pott's disease or caries of the bodies of the lumbar or dorsal vertebræ.

In diseases and injuries of the cervical vertebra the cast will be used as a [illegible] sert the upright support of the [illegible]

which to suspend the weight of the head, thereby taking the weight off the cervical vertebræ.

In relieving the vertebræ of their weight we allow nature to build up and restore, under the most favorable circumstances, the destroyed or disintregrating tissues.

All curvatures, whether antero-posterior or lateral, produced by irregular muscular contraction, not amenable to treatment by gymnastics, should be suspended until the normal curvature of the spinal vertebræ is restored as nearly as practicable, which requires two to five minutes, and then a plaster of Paris jacket applied.

Treatment of Uterine Deviations by Faradization.

Regnier (*Societe d' electrotherapie*): Despite accumulated proofs of its efficaciousness the electric treatment of uterine deviations is rarely used. There is no known method of producing contractious of the uterus which may not be satisfactorily replaced by abdomino-uterine, lumbo-uterine, lumbo-pubian faradization, which is little, if at all, painful. For retroversion, or retroflexion, uterine faradization is indicated; for ante-rversion, sacro-uterine faradization. The length of each application is three minutes; the number, three a week at the beginning of the treatment, and two at end. The treatment should not begin until three days after the end of the menstrual period. The intensity must be sufficient to make the contractions slightly perceptible to the hand which holds the uterine electrode. The induction coil used must be made of thick wire. The interruptions should be frequent. The length of treatment varies from ten to twenty sessions, rarely more. It should be longer in versions complicated by flexions, and in cases accompanied by vaginal and perineal lesions.

Steam as a Hemostatic.

Professor W. F. Snegirew of Moscow, reports the successful use of steam for hemostatic purposes in several cases where other means have been unsuccessful or inconvenient. His attention was called to the possibility of using steam as a general hemostatic, as the result of a severe hemorrhage occurring during an operation on the liver. On reading the literature of hepatic hemorrhage he was impressed, he says, by the general helplessness of the surgeon, in such cases. "Even the actual cautery was not always sufficient, and in most cases required the additional aid of a closely placed tamponade of gauze."

For some time Professor Snegirew had been in the habit of using steam as a cauterizing and hemostatic agent in the treatment of uterine disease in the following manner: After dilating the uterine canal an application of steam was made through a small metal tube inclosed in a catheter. After a half, or at most a full minute of this application, a dark fluid, with a strong brothy odor, returns through the catheter. In his experience there has been no pain attending this application, and many cases of tender, painful, bleeding conditions of the uterine mucosa have been entirely relieved.

Carrying out the suggestion from this use of steam he conducted a series of experiments with Dr. Blagewolin, to determine the hemostatic value of steam upon the liver and other organs. Their results in animals were as follows:

1. They were enabled to remove, without loss of blood, such sized pieces of the liver as they chose, the animal surviving.
2. Similar results were obtained on the spleen.
3. They removed entire lobes of the lungs without hemorrhage.
4. Considerable sized pieces of kidney were successfully removed.
5. From the brain, excision of pieces up to a limited size.
6. Bleeding from the spongy portions of the bones was stopped.
7. The marrow was scalded, but the restoration of the bones went on as usual.
8. The femoral artery of a dog, cut through, either across its course or lengthwise, did not bleed under the application of steam.
9. The wounds after the use of steam healed by primary intention in animals, and also in men upon whom it was used.

As the result of these experiments, steam was used as a hemostatic during the past summer in the Alexiner Semstwo Hospital with success in the following operations:

1. In five cases of resection of the knee-joint, without elastic bands, ligatures or artery forceps.
2. In the extirpation of a cancerous breast, under the same conditions as above; also in the removal of fatty and malignant new growths in the skin.
3. In amputation of the cervix uteri and in fibromyotomy.
4. In resection of bone and in removing sequestra.
5. In abscesses, to render them odorless and induce rapid healing.
6. In fistulæ and sinusees, especially when tubercular.

There seems little doubt in the minds of the investigators that in steam they have found a hemostatic of ready usefulness, aseptic, not interferring with primary union, and above all, applicable to parenchymatous organs, such as the liver. Certainly further reports will be eagerly awaited.—Boston *Med. and Surg. Jour.*

Surgery of the Stomach.

For cancerous tumors of the stomach surgery offers us two procedures. Resection, when the pylorus is involved, and gastro-enterostomy or a junction of the wall of the stomach with the intestine. As to the respective gravity of these operations Huinard gives a mortality of 62 per cent. in 153 resections. Le Boef, 58 per cent. in 108 resections, while Kocher had but two deaths in seven resections.

For gastro-enterostomy Guinard found reported 105 cases with 33 deaths. Rockwitz had but a mortality of 12.50 per cent., and the results of Hahn are better yet. Resection, then, is always a more grave operation than gastro-enterostomy. The contra indications are, first, great extent of the neoplasm; second, adhesions between the stomach, pancreas or liver; third, injection of the amentum; fourth, cancerous infection of the lymphatic-ganglia. As to the results of these operations, there can be no doubt but resection leaves more functional power, as the motor action of the stomach is but slightly impaired, while in gastro-enterostomy, it is quite suspended. In cicatricial contraction, resection should be the operation of choice, without malignant complications, while in extensive cancer gastro-enterostomy is the safest and most satisfactory as a palliative measure.

As for the treatment of round ulcer of the stomach we must take three factors into consideration: First, hemorrhage; second, peritonitis, and third, by perforation. Operations for hemorrhage, thus far, give us but little hope to expect much from them. Operations for peritonitis following perforation give a mortality, in 15 cases, 14 deaths.

Treatment of Epithelioma of the Face.

A. Darier (*Bul. Gen. de Therapeutique*), after having used chlorate of potassium, acetic acid, aristol, resorcin, etc., the author has adopted the following treatment: 1. The sore is well washed. 2. A solution of 10 per cent. of cocaine is applied with a pledget of cotton. 3. A few minutes later, methyline blue is applied (methyl blue, one gramme; alcohol and glycerine, aa five grammes) 4. The parts colored blue are touched *very slightly* with a steel probe dipped in chromic acid at 20 per cent. A purple reaction takes place. 5. Another methyline blue is applied again and the vicinity of the tumor is washed carefully to remove the excess of color. 6. The consecutive dressing is of cotton, moistened with 1-1000 solution of bichloride of mercury, in order to avoid the formation of scabs, which would be an obstacle to the subsequent treatment. This is repeated four or five times, at intervals of two or three days, and according to the area affected the treatment is continued for a period varying from two to eight weeks. Five successful cases were exhibited before the Dermatological Society of Paris.

Hot Salt Solution for Relief of Shock and Hemorrhage.

Dr. Wyeth, speaking at the meeting of the New York State Association of Railway Surgeons, strongly recommended the injection into the circulation, through a vein, of hot salt solution to take the place, in part, of the volume of blood which has been lost as a result of accident: "The solution which I have employed, running in as much as five pints in a single operation, is composed of clean water, which has been boiled and allowed to cool to 110° or 120° F., or just as hot as the hand can bear, to every pint of which a teaspoonful of common salt is added. I have seen the pulse go from 140, in cases of tremendous hemorrhage, steadily down to 70 to the minute, within two minutes of the injection of a pint of this solution. While it may be used cooler than 110° F., and in some emergencies this may be necessary, it is safer to give it as hot as 110° to 120°, because the cold solution robs the body of its heat, while the hot solution carries heat with it, and thus adds to the maintenance of the normal temperature. The apparatus is simple, a metal or glass pipette to go into the vein, a rubber tube three or four feet long and an irrigator bag or vessel."

Insufflation of Air for Tuberculous Peritonitis.

M. H. Follet of Lille highly recommends the insufflation of air into the peritoneal cavity in cases of tuberculous peritonitis. He maintains that when laparotomies are performed for this condition, the great relief which almost invariably follows comes through ingress of fresh air, which sets up a reactionary inflammation of the serosa, that ends in the breaking down and resorption of the tuberculous masses.

He cites remarkable cases wherein the parents of a child of ten would not consent to a laparotomy. He introduced a trocar and drew away three liters of serum and then insufflated with three liters of air into the cavity of the peritoneum. Recovery was prompt and there was no relapse. Moorhoff of Vienna treated a case of tuberculosis of the epididymis by this plan with success in 1892.

He concludes by advising that when there are contra-indications to laparotomy, this is the course to pursue, as it is not dangerous, and usually succeeds.—*Le Mercredi Med.*

Endometritis and the Gonococci.

In the *Medical Fornightly* Dr. W. H. Humiston says:

During the past few months in every case of marked disease of the tubes and ovaries that has come to my clinic at The Western Reserve Dispensary, we have been able to not only find an active endometritis present, but on examination of the secretion from the cervical canal have found the gonococci of Neiser. This is confirmed by the observations I have made in my private work in all those cases that have been suffering from uterine disease but a comparatively short time yet have swolen tubes and ovaries, and evidences of pelvic peritonitis. Cases not gonorrhœal in origin may have been suffering from endometritis for a long period, yet there is no appreciable involvement of the tubes and ovaries. These facts are important, and lead us to a realizing sense of our great responsibility in making an early diagnosis as to the etiology of every case that first consults us. If it be of gonorrhœal

origin the symptoms will generally come on quite suddenly, and are so marked that a diagnosis may be inferred, but it is always best to make the routine test for gonococci and be certain, for in some comparatively mild cases of vaginitis and endometritis you will find them present, and by adopting active, thorough treatment, you will prevent the extension to the tubes and ovaries. These septic cases must be treated on modern surgical principles, *rest*, *asepsis* and *drainage* with *curetting*. When these cases are diagnosed early and the proper treatment instituted, the abdominal surgeon will not have his belt hanging full of suppurating tubes and ovaries. Why is it? The answer is: Abdominal growths are looked for and recognized early by the general practitioner, and so will the septic cases of endometritis be diagnosed early, and its far-reaching and disastrous results averted by adopting an active, thorough treatment, as I have above indicated.

Suture of the Torn Cervix Uteri Immediately after Labor.

Severe and alarming hemorrhage from the torn cervix requires suture or ligature *en masse*. An operation to check bleeding from the uterine artery or its branches should not be called trachelorrhaphy. Lacerations of the cervix are not accountable for post-partum hemorrhage, nor are they accountable for subinvolution. The liability of an open, torn cervix to become infected is a question difficult of solution. If the confinement has been surgically a clean one, infection cannot occur. If the accouchement has been filthy, we have no right to lock up in the uterus the lochial discharge. The torn cervices of Dubosseir's incisions do not become infected. An examination of frozen sections of post-partum cases fails to show such separation of torn cervical lips as those who advocate trachelorrhaphy picture. It is difficult to tell how much of the tissue will be cervix, when involution is complete, and how much lower uterine segment or vagina, since the anatomical relations of the parts are so disturbed by the merging of the uterine and vaginal canals into one parturient tract. It is the author's belief that there is but one indication for immediate repair for the torn cervix,—hemorrhage. To do trachelorrhaphy in all cases, where even marked separation of the cervical lips appears to exist, is to introduce into obstetrics one more interfering, meddlesome, routine operation for which there is absolutely no reason; is to add more chance for infection; and is to undo what nature, at great pains and beneficently, has accomplished, viz., a provision for the free escape of the lochia. The large everted flaps of cervical tissue which we see some months after labor are not natural; but the abnormality existed before conception, has been increased by pregnancy, and demands only the operation which should have been done before conception.—*William R. Pryor, M.D., New York Medical Journal.*

Rhythmical Traction of the Tongue in the Treatment of Asphyxia.

The *Therapeutic Gazette*, gives an editorial article upon this subject. Laborde claims that this method is the most powerful and simple of all means employed against death from respiratory failure. By traction upon the tongue the diaphragm is excited to its respiratory function, the sensory impulse is conveyed by the superior laryngeal, the terminal tracheal and bronchial expansion of the pneumogastric, the glosso-pharyngeal and lingual, and the motor respiratory nerves, especially the phrenic, respond to the reflex excitation.

Traction is performed fifteen times to a minute at about equal intervals, the tongue being pulled out sharply, so that its whole body, and not merely the tip, is affected. Traction should be kept up at last thirty minutes. Mechanical artificial respiration should be applied at the same time, two assistants making pressure simultaneously, the first upon the sides of the chest and the second upon the epigastric region from below upward. The pressure is fifteen times to the minute, and at the moment when traction upon the tongue is relaxed.

By order of the Prefect of Police, notices giving the method of Laborde have been printed and posted in the life-saving stations throughout Paris.

The first case in which rhythmical traction of the tongue was employed in Paris was by Mr. Lapicida (*La Tribune Medicale*,) chief of the corps of the life-saving station. A young woman, attempting suicide, jumped into the Seine, and remained submerged for five minutes. When rescued frictions were applied, but without success; but after rhythmical traction of the tongue for five minutes respiration was established.

An interesting case is related (*La Tribune Medicale*,) of apparent death from violent shock by an electric current of a strength of more than two thousand volts. The hand of the patient was burned and his body was black. Rhythmical traction of the tongue was made for more than an hour, when natural respiration was re-established.

Prostatectomy.

Lagoutte (*Gazette Hebdomadaire de Medecine et de Chirurgie*), after an elaborate review of the operations for enlarged prostate, comes to the conclusion that it is only applicable to extremely few cases. The good results of the operations he claims are due mostly to the fact that the bladder has been drained and not to the removal of any obstruction. Excisions of parts of the prostate are satisfactory only where there is a middle lobe that is pedunculated and easily removed or enucleated. In operating by the perimeal route the large tube introduced is often a source of great distress, and cannot be borne, and in the larger number of cases the disease again causes obstruction. He advocates the employment of the simple suprapubic cystotomy of Poncet. These cases occur in patients much debilitated and un-

desirable subjects for long bloody operations, and he urges the employment of the simplest quickest means which will give the patient comfortable and satisfactory urination.

The Circulation of the Lymph in the small Lymphatic Trunks.

Ranvier has succeeded in injecting Prussian blue into the capillary network and small lymphatics in the ear of a living rabbit. The injection gave no pain nor any disturbance of the blood circulation; the course of the injection could be plainly seen. The color in the lymphatic trunks became paler and disappeared in two or three minutes, while the network of the lymphatic capillaries was still blue. This is due to the activity of the lymph circulation and not to decoloration in situ. Further the coloring matter was found in the ganglion at the base of the ear.—*Prog. Med.*

Pott's Disease in Children.

Pott's disease in children is so often recognized so late in its course that all hope for improvement is futile. The early symptoms and signs which should always be looked for are down by Dr. Dillon Brown in the *Archives of Pediatrics* in the following list of different points:

The pain, general disability and sickness are out of proportion to the apparent of spinal disease.

The onset is alarming and the progress of the disease is more rapid than in tubercular caries—the paralysis being an early symptom and the deformity appearing even in a few weeks after the beginning of the symptoms.

The local pain is intense; and the peripheral pains, the deformity, the extreme spinal disability and the paralysis, including incontinence of urine and fæces, rapidly grow worse in spite of rest in bed and instrumental support.

Secondary disease soon appears, rapid emaciation and marked cachexia are seen, and the patient does not live more than six or eight months.

Whether a vertebral caries is due to syphilis or to tuberculosis is of immense importance as regards prognosis and treatment. In both diseases the symptoms are almost identical, and the diagnosis must be based upon the history, the presence or absence of the evidences of syphilis, and the result of treatment. In tuberculosis there is more likely to be an evening rise in temperature, and the pus and debris may contain tubercle bacilli. Syphilis is suggested by nocturnal pains and the involopment with chronic disease of some other joint or joints or some other part of the spine.

Brown-Sequard Method.

Gibier (*New York Therapeutic Review*), after a brief review of Brown Sequard's work and the results obtained by him, reports his personal observations as to the hypodermic employment of testicular and other organic extracts. Two cases of progressive muscular atrophy and two cases of paralysis agitans showed no improvement. In two cases of cancer there was very marked improvement in the general condition. A number of other cases are cited in which the cancer cachexia was practically cured by orchitic extract.

The case of Megnin's dog is also recalled. This animal was in the last stage of cachexia produced by general sarcomatosis and was paraplegic. After three weeks of organic fluid injection he was able to climb a flight of stairs, and six weeks later was entirely cured. Ultimately the dog was killed accidentally. The autopsy showed that the many tumors of the serous membrane and the viscera had undergone fibro-calcareous degeneration Two cases of diabetes were treated with extracts from the testicles and pancreas; one was improved and the other apparently cured. One case of nocturnal emissions was markedly improved. One case of epilepsy was practically made worse. One case of Thomsen's disease (muscular spasms and trembling on the beginning of voluntary motions) was improved. In neurasthenia the results were most excellent. Several cases of locomotor ataxia were improved. One case of bulbar paralysis apparently hopeless in its prognosis was cured. Here both extract of testicle and of nervous matter were used.

A New Method of Anæsthesia.

M. M. Paul Langlois and Maurange read (*Chem. and Drug.*) a paper at the Academy of Medicine, Paris, on a new method of anæsthesia by the association of chloroform with sparteine and morphine. The object of this combination is to diminish the danger of stoppage ot the heart and fainting in anæsthesia by chloroform. M M. Langlois and Maurange state that a quarter of an hour before administering chloroform they give the patient a hypodermic injection composed of three centigrammes of sparteine and one centigramme of hydrochloride of morphine. This they have used in 140 cases, and in none of them had they the slightest anxiety regarding the heart's action. The only objection made to the paper, and it was acknowledged by the authors, was that many hundreds of experiments are necessary before it is possible to judge definitely regarding the utility of the method.

Incontinence of Urine.

Dr. White's formula is:

Benzoate soda.....	
Salicylate soda.....āā	gr. xv
Ext. belladonna.....	gr. xxx
Cinnamon water.....	ʒ iv

A teaspoonful four or five times a day.

—*Archives of Pediatrics.*

Hysteria.

Rosser suggests $\frac{1}{10}$ grain of apomorphine, hypodermatically, to break up and prevent the recurrence of hysterical attacks.

Double Castration Under Cocaine for Head Symptoms, etc, Due to Injury of Testicles.

Marshall (*Virginia Medical Monthly*) reports the case of a man, aged forty-seven, who had lost the power of sexual intercourse, as he supposed, from an injury by lifting The testes and cord became tender on pressure and were at times extremely painful, the cremaster contracting spasmodically and producing severe headaches. The patient's mind became greatly affected; he drifted into a melancholic state, even refusing to take food.

Marshall injected a two per cent. solution of cocaine, using in all, two drachms of the solution. He then removed both testicles. This was done without pain. The results of the operation were highly satisfactory. The pains were cured and the head symptoms disappeared, the patient's mind remaining perfectly clear.

The Flap Method of Operating.

Chiene advocates the more general use of the flap method of operating. It consists in exposing a part by means of a flap instead of making a direct incision down to it. The advantages claimed are that the wound in the deeper parts is at a distance from the skin wound, the skin over the deeper wound is not interfered with; it supports the deeper tissues which have been divided, and rapid healing takes place. The flap is composed of skin and subcutaneous tissue. It should, as a rule, be crescentic, and not horse shoe shaped. The incision should be made as far as possible from sources of septic infection. The main blood-supply should enter the base of the flap; this, however, is secondary. He recommends its use in the removal of loose cartilages from joints, in operations for hernia, in excision of the knee, in the removal of tuberculous glands, operations on the tendons, and in many other cases.—*Brit. Med. Jour.*

Acetanilid as a Surgical Dressing.

At a recent meeting of the Philadelphia County Medical Society, Dr. Thomas S. K. Morton read a report of the use of acetanilid in surgery, based upon his observations in an extended hospital and private practice. The results were so exceedingly favorable that he recommended its general adoption. In all operation on wounds, including amputations, used as a dusting powder, it promoted healing without suppuration. Its effect was to thoroughly dry the wound so that the usual drainage tube was not necessary. In cases of scalds and burns it dries and soothes the affected surface, allowing healing to take place rapidly. As a dressing to chronic sores and ulcers it proved superior to other dressings. But two cases of constitutional effects were observed, one in his own practice and one reported by a surgeon in California; and, in both, the powder was applied over a large area in cases of extensive burns. Neither case was fatal.

Acetanilid is very cheap, being at present only forty cents per pound. It is colorless and non-odorous. It is soluble in five parts of alcohol, and in four-tenths parts of boiling alcohol; in 194 parts of water at 59° F., and in eighteen parts of boiling water, in eighteen parts of ether, in equal parts of chloroform, and in the various petroleum oils in the proportion of forty grains to the ounce. In powder form it may be mixed with pulverized starch, boracic acid, or, if an alkaline powder be desired, bicarbonate of sodium. The best preparations are as follows:

For dusting powder, pure acetanilid, or one ounce of acetanilid to two to four ounces of starch, freely triturated; for a solution, one drachm of acetanilid dissolved in five drachms of alcohol, to which add about eight ounces of boiling water and let cool; for an oily solution, forty grains of acetanilid to one ounce of liquid petrolatum; for an ointment, forty grains of acetanilid to one ounce of petrolatum; for a collodion, forty grains of acetanilid to one ounce of collodion. These proportions will be modified by the practitioner to suit particular cases as his experience advances.—*Indiana Med. Jour.*

Traumatic Glycosuria.

Glycosuria in any form is always an interesting study but ever since the experiments of Claude Bernard on this subject the study of traumatic glycosuria has occupied scientific attention more or less. Drs. F. A. Higgins and J. B. Ogden have made observations on 212 cases of head injuries in the Boston City Hospital and their conclusions as laid down in the *Boston Medical and Surgical Journal* are exceedingly instructive. They are:

1. That, after injury, sugar may appear in the urine as early as six hours, and disappear within twenty-four, the average time for its appearance, however, being from eight to twelve hours; for the disappearance of the same, from the fifth to the ninth day.

2. That a small proportion of the cases may exhibit a permanent glycosuria from the date of injury to the head.

3. That acetone and diacetic acid are rarely if ever found in such cases, excepting where the condition becomes a permanent glycosuria, and even then probably only after a number of months or years.

4 That of the 20 sugar cases here recorded, 11 (55 per cent.) had received an injury to the right side of the head; 5 (25 per cent) to the left side; 3 (15 per cent.) to the occiput, and 2 (10 per cent.) where there was no external evidences of violence.

5. That it is impossible in the present state of the knowledge of the pathology of diabetes and glycosuria to draw any inferences from the autopsies which have been obtained. It was thought best, however, to report them in full.

6. That there is little to be said in regard to the mortality. Of the 20 cases, 8 died—6 being the direct result of severe injuries, 1 from intercurrent disease, and the third probably from alcoholism. In the 212 cases, 16 were fatal, 50 per cent. of these having glycosuria.

Septicemia.

Septicemia after childbirth and particularly after miscarriage is a very dangerous complication. Dr. D. Rose gives his method of treatment of such cases in the *New York Medical Journal*. He wipes out the uterine cavity until the borated cotton comes away odorless and then he applies iodized phenol to the interior of the uterus. This he repeats daily, if necessary, and also gives internal medication. This method of treatment is attended with no pain, no risk, and in his hands has been uniformly successful.

Movable Kidney.

De Renzi (*Brit. Med. Jour.*), in a clinical lecture on a case of movable kidney, says that in the physical examination of such cases he prefers the lateral to the dorsal position. Movable kidney is often associated with dilatation of the stomach; this is either a mere coincidence, or due to pressure on the duodenum, or a reflex neurosis. Glenard believes that movable kidney is only part of a general prolapse of the abdominal organs due to loosening of the various ligaments. In De Renzi's case there was also prolapse of the stomach with slight dilatation and slight prolapse of the uterus. In cases where there is evidence of a more or less general prolapse of the abdominal organs, surgical interference for the movable kidney is always insufficient.

ARMY AND NAVY.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE FIFTEEN DAYS ENDING APRIL 15, 1895.

Purviance, George, Surgeon: detailed as Chairman Retiring Board for physical examination officers of revenue cutter service, April 8, 1895.

Austin, H. W., Surgeon: detailed as member Retiring Board for physical examination officers of revenue cutter service, April 8, 1895.

Carter, H. R., detailed as Recorder Retiring Board for physical examination officers of revenue cutter service April 8, 1895.

Glennan, A. H., Past Assistant Surgeonl granted leave of absence for three days, April 9, 1895.

Stoner, J. B., Past Assistant Surgeon: when relieved to proceed to Philadelphia, Pa, for duty, April 5, 1895.

Guiteras, G. M., Past Assistant Surgeon: granted leave of absence for six days, April 5 and 8, 1895.

Perry, J. C., Past Assistant Surgeon: to proceed to Portland, Ore., and assume command of service, April 5, 1895.

Eager, J. M., Past Assistant Surgeon: to proceed to Gulf quarantine station for temporary duty, April 5, 1895.

Stewart, W. J. S., Assistant Surgeon: to proceed to Philadelphia, Pa., for temporary duty, April 9, 1895.

Norman, Seaton, Assistant Surgeon: to proceed to Norfolk, Va., for temporary duty, April 9, 1895.

Cumming, H. S., Assistant Surgeon: to proceed to Boston, Mass., for temporary duty, April 9, 1895.

NEWS AND MISCELLANY.

Northwestern University Woman's Medical School.

CHICAGO, April 13, 1895.

At a Meeting of the Faculty of the Northwestern University Woman's Medical School the following resolutions were unanimously adopted and ordered to be placed before the Illinois State Board of Health:

WHEREAS, On three occasions within the past three years, the Illinois State Board of Health has licensed to practice medicine in this State, students who have not properly qualified themselves for such duties, and whose incompetence has compelled us to withhold the degree of Doctor and Medicine, and

WHEREAS, By common report we are informed that the State Board has adopted a similar policy with reference to numerous other persons; therefore,

Resolved, By the Faculty of the Northwestern University Woman's Medical School that the State Board be requested hereafter to make its examinations so rigid that persons incompetent to obtain the degree of Doctor of Medicine from first-class medical colleges cannot obtain license to practice from the Illinois Stated Board of Health.

Resolved, That the State Board of Health be urged to do all in its power to secure a modification of the State law so that the privilege of examination for license to practice in this State can only be obtained by graduates of recognized Medical Schools in good standing.

Resolved, That for the protection of the life and health of our people we believe it the duty of the State Board of Health to do all in its power to prevent the entrance into the medical profession in this State of any persons not properly qualified; and

Resolved, further, That in the interests of humanity and medical science we believe the State Board should make its standard of qualifications as high as that of the best medical college in this country and that it should do all in its power to aid and encourage the efforts of the profession and the people for thorough medical education and higher requirements of licentiates and for the degree of Doctor of Medicine.

MARIE J. MERGLER,
Secretary.

Jefferson Medical College Reunion, Class of 1874.

It is proposed to have a reunion of the class of 1874 of the Jefferson Medical College, on the evening of May 10th, in Philadelphia. Members of the class who have not received an announcement will please forward their names to E. E. Montgomery, 1715 Walnut Street, Philadelphia.

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ORIGINAL ARTICLES.

THE NEUROTIC ELEMENT IN PULMONARY CONSUMPTION.*

THOMAS J. MAYS, A.M., M.D.,† Philadelphia, Pa.

That disorder of the nervous system plays a prominent part in the production of pulmonary consumption I have long been convinced, and in the various papers which I have written on this subject during the last seven or eight years I have made an effort to show the data on which this theory rests, and in response to the kind invitation of your secretary I appear before you to-day for the purpose of calling further attention to this interesting subject.

I am by no means the first advocate of the nervous theory of pulmonary consumption. As far back as 1842, Cheneau ("De l'Influence de la hautième paire dans la Production de la Phthisiè," Paris, 1842) attributed this disease directly to disorder of the pneumogastric nerves, and indirectly to an abnormal condition of the central nervous system. In 1850 Dr. J. C. Holland defined pulmonary consumption as a disordered condition of the nervous system. Dr. Copland regarded tuberculosis and scrofula as being dependent on abnormal conditions of the nervous system, and believed that the accompanying disturbances of digestion, assimilation, circulation, and even the local determination of these diseases are traceable to the state of the nervous influence of these parts. Laycock, in his clinical lectures on Physiognomical Diagnosis of Disease (*Medical Times and Gazette*, 1862, p. 205) says that "defective pneumogastric innervation consequent upon a loss of cerebro-spinal power is a very common predisposing and exciting cause of phthisis." Dr. Clifford Allbutt, in discussing the pathology of a variety of phthisis, states (*Medical Times and Gazette*, Vol. II., p. 613) "The more, however, I study the relations of the disease, the more I am satisfied that the lung mischief is also a neurosis—by which I mean, that the lesion is one not originating in the local tissues, but in the nervous system." Dr. Clouston, in his recent work "The Neuroses of Development" says (p. 92), that "facts seem to show that if tuberculosis cannot itself be called a neurosis it is in most cases dependent for its existence on a trophic neurosis, or bears the closest affinity to it."

From this it will be seen that this subject has interested some of the most prominent minds in the medical profession during the last fifty years. Indeed, when the richness and fertility of this field of study is surveyed, one is astonished to find how completely it has fallen into abeyance at the present time. It is practically forgotten, yet I believe that a full and thorough examination of its premises

*Read before the Section on Neurology and Medical Jurisprudence of the American Medical Association, at its meeting in Baltimore, May 7, 1895.

† Professor of Diseases of the Chest in the Philadelphia Polyclinic, and Visiting Physician to the Rush Hospital for Consumption in Philadelphia.

will give us proof of the most convincing character that it is the only key to solve the complex etiology of the disease under consideration.

At the very outset I would lay down the proposition that any agent or influence which has the power of disordering of or interfering with the integrity of the respiratory nerves in particular, or with the nervous system in general, also has the power of producing pulmonary consumption and other forms of lung disease. Thus in a recent canvass of the pathological literature of this subject, I found the records of over a hundred cases of phthisis in which the pneumogastric nerves, or the respiratory centres, were compressed or injured or diseased in connection with syphilis, alcoholism, diphtheria, measles, diabetes, multiple neuritis, locomotor ataxia, bulbar paralysis, tumor of the pons and medulla oblongata, etc.

Phthisis follows in the wake of many nerve poisons. Mercurial tremor and paralysis are well known, but the investigation of Kussmaul develops the fact that the majority of those who suffer from *mercurial intoxication*, as looking-glass gilders, mercury miners, etc., are very liable to do, also fall victims to pulmonary consumption. Even the vitality of the offspring of those who suffer from mercury intoxication is vitiated, for it is said that scrofula, rickets and pulmonary consumption are exceedingly prevalent in the children of those who are engaged in mercury manufacture; and that it induces abortion and still-births among female employèes.

Dr. Bäumler cites an interesting instance of mercurial intoxication in a family. Male, aged sixty-nine, became a gilder when thirty-nine years old and worked at it for twenty-five years, when he was compelled to seek other employment on account of serious mercurial poisoning. He was well and worked for twelve years, when he became salivated, suffered from stuttering, tremor, loss of memory, shedding of teeth, etc. He was married three times and all his wives followed the occupation of gilding. From the first union there were four children, one of whom died of gangrene of both feet, and the other three and the mother died of consumption. From the second union there were two children who, with their mother, died of consumption. From the third union all the children who were born before the mother was employed in gilding were well; while one who was born after this period was a weakling and died of cause not given, but the mother died of consumption.

Lead is another metal which has the power of deteriorating the nervous system and of provoking pulmonary phthisis. Statistics show that the disease is from two to three times more prevalent among lead workers in Wales than it is among farmers living in the same locality, or among the general population of England and Wales.

Among the agents which are most potent in the production of phthisis, I would place the abuse of *alcohol*; and I would call the attention of those to this subject who are directly engaged in the study of inebriety. I know that my friend Dr. Crothers has already made some valuable contributions to this question, and I hope to hear of his further experience in this direction to-day. It is well known that this agent exerts a poisonous influence on the nervous system, and especially on the peripheral nerves. Very frequently the nerves do not show any marked changes, but on closer examination evidence of parenchymatous degeneration with more or less interstitial neuritis is discovered, suppression of the catamenia in women, paralysis of respiration and of deglutition and disease of the vagi and of the lungs are also observed to be of common occurrence.

Syphilis is another nerve poison which is often the unsuspected cause of pulmonary disease—the typical pathological changes of which are an abundance of interstitial connective tissue proliferation, peri-bronchial induration, diffuse thickening of the lobular parenchyma, syphilitic gummata and nodular induration or broncho-pneumonia. The poison seems to attack the cranial in preference to the peripheral nerves. That the vagi are frequently implicated is shown by a number of cases among my collection.

Whooping Cough is preëminently a specific spasmodic affection of the respiratory nerves. Hufeland, Hoffmann, Wendt, Walshe and Puldame ascribe its principal lesion to irritation of the pneumo-gastric nerve. The pulmonary changes of whooping cough are interesting because they show the direct relationship between the disease of a nerve and that of the organ

which it supplies In all severe cases there is congestion of the pharyngeal, laryngeal and bronchial mucous membrane and of the lungs, together with dyspnœa and feebleness of the respiratory sounds. There may also be a shade of dulness in some parts of the lungs. Epistaxis, hæmoptysis, emphysema, chronic bronchitis, broncho-pneumonia and consumption are frequent complications, especially in the offspring of those who bear a history of chest disease.

Whatever the precise etiology of *influenza* may be, it is essentially a disease of the nervous system. Its morbid anatomy is principally seen in the meninges of the brain, spinal cord, and peripheral nerves. Pulmonary œdema, broncho-pneumonia, capillary bronchitis, and pleurisy are among its common sequela. The pulmonary disease was believed by Graves to be due to paralysis of the vagi, and Walshe says this poison seems to exert a special influence on the pneumogastric nerve.

Cerebro-spinal meningitis—an affection which chiefly involves the medulla oblongata and its immediate connections—is nearly always associated with pulmonary derangement. Then there is another group of diseases—the most prominent of which are *beri-beri*, *pellagra*, *diabetes* and *leprosy*—in which disease of the nervous system and disease of the pulmonary organ play a prominent rôle.

Epilepsy is also a disease in which the medulla oblongata is involved, and it is in the latter area that we will have to seek an explanation for the ultimate and long-recognized association between this disease and pulmonary disease. Echeverria. in his work "Epilepsy" states (p. 313) "I have most closely investigated the relation of pulmonary tuberculosis and epilepsy, and undoubtedly the genesis of tubercles in the lungs is favored by the lesion in the medulla oblongata proper to epilepsy. I have traced the pulmonary trouble from its inception and feel convinced that the association is more than a casual coincidence of both morbid conditions. Besides Echeverria, Van der Kolk, Jobert de Lambelle, Stuart Cooper and Rostan reported a number of cases of epilepsy associated with pulmonary disease in which the pons varolii, medulla oblongata and vagi were disordered.

Asthma is a spasmodic affection of the pneumogastric nerve and it is therefore of great interest in this connection to find whether this disorder develops into more serious lung disease or not. Asthmatics are generally supposed to be long lived, but I do not believe there is much clinical evidence to support this belief. Of course there are some exceptional cases which undergo spontaneous cure in the later years of life, but in the majority of these sufferers the attacks incline to become continuous and it is to these my remarks refer. I believe that the tendency in such is a termination in pulmonary consumption. In support of this Fuller ("Diseases of the Chest") states that, in spite of the belief that asthma and pulmonary consumption are antagonistic, many asthmatics die of the latter disease. Williams ("Pulmonary Consumption") shows that in 385 cases of phthisis seven began with asthma, and states that the tendency of asthmatic parents to have phthisical children is hardly sufficiently recognized. James ("Pulmonary Phthisis") asserts that asthma and whooping cough are likely to predispose to or terminate in phthisis.

Hysteria implicates the respiratory organs in the form of accelerated breathing, dyspnœa, aphonia, laryngeal and pharyngeal paralysis, etc., and has an innate tendency to develop into pulmonary disease either in the individual or the offspring. Professor Grasset ("Brain." vols. vi and vii) found that among the patients, brothers and sisters, grandparents, and uncles and aunts of 44 hysterical patients, there were 60 who died or suffered from phthisis.

Most all of these interesting cases furthermore demonstrate that phthisis may follow, or be followed, alternate with, or evolve from hysteria and other nervous disorders in the same individual. Thus in cases 2, 26, 27, 30, 42 and 43 phthisis followed hysteria; in case 4, bronchitis followed catalepsy; and in case 17, epilepsy preceded phthisis. In case 28 there was alternation between hysteria, phthisis and epilepsy; in case 29 whooping cough and hysteria preceded phthisis; in case 31 phthisis existed first, this was displaced by hysteria, after which the patient suffered from sciatica, then from boils, and in the end recovered altogether. In cases 32 and 33 there was alternation between phthisis and hysteria, and final recovery from both diseases. In case 34 the patient became phthisical, and then suffered

from hysteria during which time the phthisis improved, and in the end she became paraplegic. In case 35 hysteria came first and then phthisis, after which the hysteria abated and the phthisis progressed. In the end the patient improved. In case 36 the patient suffered from phthisis and then became hysterical. She recovered from phthisis but remained hysterical. Case 37 had phthisis first, then hysteria, after which the phthisis improved and disappeared, but the hysteria continued. Case 38 was phthisical first, then became a somnambulist, after which he recovered from phthisis. Patient 39 had pneumonia, then paraplegia, then phthisis and finally hysteria. Recovered from phthisis. In case 40 there was phthisis, then hysteria and hemiplegia, after which phthisis abated. In case 41 bronchitis appeared first, then convulsions, then phthisis and finally hysteria. Patient improved in the end. In case 44 hysteria was entirely displaced by phthisis.

Idiocy has a powerful bearing on this subject. Thus in 2,380 cases of idiocy and imbecility which were admitted into the Royal Albert and Darenth asylums in England (see Tuke's "Dictionary of Psychological Medicine," Vol. 1, p. 664) it was shown that a family history of consumption existed in 674 of the inmates, or in 28.31 per cent. Dr. Langdon Down, physician to the Earlswood Asylum for idiots states ("Mental Affections of Childhood and Youth," p. 221), that the statistics of London show that the deaths from phthisis constitute 115 per 1000 of the general mortality. His statistics at Earlswood indicate that phthisis was the cause of death in 398 per 1000 of the general mortality. His last hundred post-mortem records show that 62 were phthisical, in some of which cases there was no record of disease in the family, and he believes that in these cases phthisis was the sequence of idiocy. "Defective innervation, in all probability, led to malnutrition and predisposed to a tubercular condition." Dr. Down also contributes the histories of 20 families, each of which was burdened with idiocy, and among the parents, sisters, brothers, grandparents, uncles and aunts of which there were 35 who suffered from consumption.

The late Dr. Isaac N. Kerlin, Superintendent of the Pennsylvania Institute for Feeble-minded Children, in an essay (*Trans. Penna. State Med. Society*, 1880, Part I., p. 161) states that if the tables which he presented in this paper were prepared by a special advocate to prove that consumption is the main factor in the generation of idocy the effect could not be more startling: but "as they are the result of careful inquiry, without any theory to prove or disprove, I ask for them you respectful judgment." In the table to which he refers he gives the histories of 100 families in each of which there existed a case of idiocy, and this shows that there were 145 members of these families, only including parents, sisters, brothers and grandparents, who were afflicted with pulmonary consumption. In view of the fact that only about 17 per cent. of the general population die of pulmonary consumption this death rate is simply enormous. It means that the mortality from this disease is from eight to ten times greater among this unfortunate class than it is among the ordinary population.

Moreover, no one is surprised to find that insanity and epilepsy create a special liability to idiocy in the offspring, but it is certainly very startling, especially in the light of its supposed bacillary origin, that consumption is more powerful in this respect than any other cause which is known to lead to this disease. Thus the statistics of the Royal Albert and Darenth Asylums, already alluded to, show that among the hereditary causes of 2,380 cases of idiocy and imbecility, consumption ranks the highest, having a percentage of 28.31, while insanity, epilepsy and alcoholism have a percentage of 16.47, 8.69 and 16.38 respectively.

Dr. Down, in the work already referred to, makes the following pertinent reflections concerning the relationship which exists between phthisis and disorder of the nervous system: "It appears to me that tuberculosis must be accepted as one important cause of idiocy; that it impresses special characters thereon while imparting a strong family likeness to the subjects of this class. It is no less clear to me that idiocy of a non-tubercular origin leads to tuberculosis. Whether this arises through the influence of the pneumogastric nerve, mal-assimilation of food, or defective innervation, it cannot but be regarded that the connection between these two maladies is by no means accidental, and that a due

appreciation of this relation is necessary to those who would treat effectively congenital mental lesions.

The clinical association between *insanity* and pulmonary consumption has been noticed by many authors, among whom are Van der Kolk, Esquirol, Georget, Burrows, Ellis, McKinnon, Clouston, Boyd, Savage, Norman, Tuke, Laennac and others. Maudsley says ("Pathology of Mind", p. 113), "Perhaps I might set it down as a true generalization that the morbid neurosis, when it is active and gets distinct morbid expression, may manifest itself in four ways: (*a*) In disorder of sensation—for example, paroxysmal neuralgia; (*b*) in disorder of motion—for example, epilepsy; (*c*) in disorder of thought, feeling and will—mental derangement; (*d*) in disorder of nutrition—whereof diabetes is the earlier and phthisis is the later stage." Doctor Blandford states ("Insanity and its Treatment," p. 56), "I have found, however, that phthisis and insanity do frequently co-exist in the same family." Doctor Stearns says (*American Journal of Insanity,* 1888, p. 87), "We often see a consumptive having a child, which instead of developing consumption develops insanity, and *vice versa,* an insane person may have children of a phthisical tendency." Doctor Mosher relates an interesting case (*Medical Record,* 1895, p. 390): Female, aged sixteen, was admitted Sept. 25, 1893. Said to have been insane for eight years, and her attacks were of epileptiform nature, characterized by sudden outbreaks of violence, and probably associated with unconsciousness. Heredity was the assigned cause, eight paternal great uncles and great aunts had died of phthisis, and her paternal grandfather was epileptic in youth and neurotic. During her residence of about six months she had intractable bronchitis and laryngitis with aphonia. Clouston, in his "Neuroses of Development," makes the observation (p. 91) that the death-rate from phthisis among the insane is four times higher than among the general population, and that both diseases are very common in different members of the same family, and that heredity towards phthisis may determine insanity and *vice versa.* The same authority also remarks (Lectures on Mental Diseases, p. 461): "The form of insanity which is commonly associated with phthisis is monomania of suspicion and melancholia. Nearly all pure cases of this kind sooner or later die from phthisis. The most marked cases of phthisical insanity are those with a strong hereditary tendency to both insanity and phthisis or to the neuroses. It is surprising how often both diseases occur in different members of the same family. * * * The constitutional weakness which tends to end in insanity *is akin to that which tends to end in phthisis*" (p. 468). Schroeder Van der Kolk states (*Sydenham. Pub.* Vol. xi, p. 170), that phthisis and insanity frequently co-exist, or alternate with one another. We often see phthisis occurring in families, some members of which are affected with insanity. Doctor Busi, who collected his statistics at the asylum for the insane at Basle, makes the interesting observation (*Neurolog. Centralblatt,* 1887, p. 282), that in many cases we must regard tuberculosis and insanity as an expression of the same constitutional weakness. In fifty per cent. of his insanity cases there was tubercular heredity; in 47.2 per cent. there was neuropathic heredity, and in twenty per cent. there was a mixture of the two. On account of the frequency with which both diseases exist in the same families he believes that that there is an internal relationship between the tuberculous and psychopathic constitution.

Dr. Bianchi describes a pneumonia (*Neurolog. Centralblatt,* 1890, p. 249) which frequently occurs in paralytics, and which differs clinically and anatomically from croupous pneumonia. The temperature is usually low, cough and expectoration are sometimes absent, the respiratory movements are superficial, weak and slow, and the affected lung usually remains in a hepatized condition. Frequently there exist larger or smaller gangrenous foci, and nearly always, if the case is of long standing, a puriform infiltration of the alveoli and bronchi. All these manifestations simulate those of pneumonia which the author produced in rabbits and dogs by section and compression of the vagi. In a number of paralytics who died of pneumonia he was able to trace a primary degenerative atrophy of the vagi, and hence he believes that these pneumonias are dependent on vagus degeneration. He does not believe with Traube and Frey, that this pneumonia is engendered by the swallowing of food. (Shluck-pneumonie).

This subject is one of vast proportions

and if I had time sufficient I might inquire whether the symptomatic and the therapeutic evidence is not equally as favorable to the neurotic theory of phthisis as that is which comes from the pathological side of this question. Do not the weakness, the easy fatigue, the restless sleep, the extreme nervousness which is present in many cases, the dyspnœa, the hoarseness and aphonia, the thoracic pain, etc., indicate that the principal nature of phthisis is one of nervous exhaustion? And therapeutically is it not true that we get the best results from those measures and agents which prove to be the most efficient in the treatment of nervous diseases? And are not these rest, nutritious food, strychnine, electricity, hypophosphites, cod-liver oil, phenacetin, capsicum, quinine, and remedies which appeal to and influence the nervous system?

THE RIGHT TO QUESTION AUTHORITIES, AND THE VALUE OF MEDICAL TESTIMONY.*

JAMES W. KEISER, M.D., READING, PA.

This subject suggested itself to me at one of our meetings, where great stress was laid upon the opinions and testimony of authorities, while, to me, the drift of facts seemed to contradict these opinions and testimony. It is not for the love of disputing that I take up this subject, but with the belief that I can make some deductions which, in the future, may possibly aid us in arriving at correct conclusions.

The word *authority* does not occur in any medical dictionary in my library, so I am compelled to fall back upon Webster. His definition of authority, so far as it pertains to the subject under consideration is, "The power derived from opinion, respect or esteem." I think we are compelled to admit that anything that is published is more or less an authority. Any one of us, if we take a stand on a subject, would gladly quote anything that is printed as more or less confirmatory of the view taken. There are authorities of every kind, and each man has a preference, giving more weight to the sayings of one than of another. Even were all authorities agreed their opinions are not final, as we know that twenty years will work such havoc with our present knowledge and opinions that the books on our shelves today, will, be then, only historical memorials of the past. All future progress and revolutions in medicine will be largely made by sacrificing our present authorities. Some of these advancements will be bitterly condemned as being false, and yet in time will be thoroughly established.

On the other hand, many of these departures will be steps of error, although backed by numerous great names and apparently firmly established, and only to be finally overthrown as knowledge extends. The lesson which I wish to inculcate is that we must not too blindly worship authority; that we must reserve the right to question and weigh any proposition, no matter how strongly it be entrenched by great names.

The history of the past admirably illustrates the need of such a stand. There are startling instances in science and medicine, where a mad infatuation for the sacredness of the opinions of great men has stopped the wheels of progress and perpetuated great errors. To illustrate the value and the importance of the right to question authorities, I need not confine myself strictly to medicine. Of all great men, no one has had greater prestige than Sir Isaac Newton. As a scientist, a philosopher and a mathematician he overshadowed all his contemporaries. He did much to advance our knowledge of light and constructed the corpuscular theory, which, coming from such a source, was accepted as a fact. Living contemporaneous with him was another great intellect, Sir Thomas Young, who also made researches in light. He mathematically proved the falsity of Newton's position on this sub-

* Read before the Berks County Medical Society, March 12, 1895.

ject, advanced the undulatory theory and clearly demonstrated the truth of this theory, which is to this day universally acknowledged as correct. Yet such was the weight of Newton's authority that it was not accepted until both Young and Newton were dead and buried many years. This is an instance in which authority retarded the advancement of knowledge and perpetuated error.

Some hundreds of years ago, an epidemic threatened Madrid, Spain, and the government called a council composed of leading physicians, church and state dignitaries to consider what steps were necessary to take to avert the threatening diaster. The question arose whether the streets should be cleaned or not. They resolved that their ancestors in their great wisdom had seen fit not to clean them, that it would be impious for them to question the wisdom of their ancestors, and therefore the streets should remain dirty. The truth of this statement is attested by Buckle, one of the greatest of philosophical historians.* When this council met, Spain was mistress of the seas and of the world; but where such blind devotion to the authorities of the past was followed, it could have only one result, and that was to leave her far behind in the race of advancing civilization. To day, as the natural consequence of such a course, she is so poor that none will do her reverence.

John Hunter was, perhaps, the greatest of medical and surgical intellects that the modern world has ever possessed. His efforts and successes in the advancement of medicine, surgery and pathology were truly prodigious. He performed an experiment in which he inoculated himself with the pus of gonorrhœa and produced a hard chancre.† He, therefore, claimed that gonorrhœa and syphilis were identical. His name carried such weight and authority that this erroneous view was blindly accepted for many years after his death.

Numerous instances could be adduced where the conclusions of great men were false, and the great weight attached to their names have held back progress. There is no standard of truth or opinion which can be adopted, and the physician who will sink his own individuality when he perceives error, or, after giving a subject careful consideration, sees that the position taken by the authoritles is questionable, is not true to himself or to his noble profession if he does not take issue with what he regards as false. It is true that mistakes may be made in questioning things that do not admit of question. But it is better to make such occasional mistakes than to blindly accept everything because it is taught, and thus to destroy all independence of thought.

The value of medical testimony is practically a continuation of the subject just considered, and I wish to throw a doubt upon the value of much of the testimony given by the profession, especially where applied to the estimation of new treatments. For illustration I again resort to the history of medicine.

Many absurdities have been practiced under the guise of scientific medicine. They were sanctioned by the best medical intellects of their day, and were based on the testimony of innumerable observers. "Seeing," as the phrase goes, "is believing," and these monstrous absurdities, strange to say, depended upon the wonderful results reported as obtained by physicians in their practical application to the cure of disease. Broader knowledge and experience have wiped out much of this "truck" which was once regarded as part of the science of medicine, but I fear much still remains unsuspected by us, and that it will take much time to eliminate, if this be possible, all errors contained in our common stock of medical knowledge. I will mention a few of the absurd measures resorted to by the physicians of the past, and will briefly review some of the absurdities of our own days. I will show that, at least so far as testimony and correct deductions as to the value of treatments are concerned, we are just as apt to make mistakes as were they of some centuries ago. It is true that many errors practiced by physicians were nothing more than the abuse of valuable drugs and measures, in which the principle was extended beyond its limitations, as, for instance, the abuse of mercury, and of blood-letting.

To this day, scrofula is sometimes called the "King's Evil," and when we question, "Why this nomenclature?" the answer comes that at one time, in England, it was generally believed that the king, by placing his hand upon a

* Buckle's History of the Civilization of England.
† International Encyclopaedia of Surgery, Vol. II. P. 342.

sufferer from this disease, would banish it.* This method of cure was approved by the physicians of past days.

If any of you have a pharmacopeia which goes back far enough, you will find in it the unguentum armamentarium. The idea was that, if a weapon or object inflicted a wound, this ointment, instead of being applied to the wound, was to be applied to the weapon or object that caused the wound. Thus, if an ax cleaved a man's skull, or an ox gored a woman's abdomen, in place of applying the salve to the wound of the skull or of the abdomen, it was applied to the ax or to the horns of the bull. The wise physicians of that day, to eliminate all mental impressions of the patient, in numerous instances tested this miraculous ointment unknown to the sufferer. And the instant the application was made, the patient's condition began to ameliorate; the violent pain was assuaged; the wound began to heal and the patient made a speedy recovery! This absurdity is paralleled by the modern followers of Hahnemann. The thirtieth dilution represents a standard very much used by homœpaths. To vividly illustrate what this dilution represents, I will give you the benefit of a calculation, which I am informed was made by Sir James Y. Simpson, the discoverer of chloroform. He calculated that if, when he created Adam and Eve, God had placed in the garden of Eden one grain of arsenic diluted to the thirtieth dilution, Adam and Eve and all their descendants could have taken a dose of this preparation every minute of their natural lives, and still one-half of a grain would be left. It is almost incomprehensible that such an absurd form of medication is to this day practiced by some of our neighbors—men who can read and write, and who pose as leading citizens and gentlemen of education and culture. One would think that a man who could believe such rot would be a suitable candidate for Wernersville, where incurables only are received.

When we come down to modern times, innumerable specific methods of treatment have been adopted. The general credence given to these treatments has depended upon the testimony of many high authorities, and yet time, in most instances, has demonstrated their utter worthlessness. Koch's tuberculin, only a few years ago, caused every one to marvel at the brilliant results obtained by its use. At last consumption was met and successfully vanquished. At least such were the unanimous reports that came from every medical center of Europe. Not only was it an infallible specific in consumption, but in all the allied diseases that have any relation to tubercle. Under its use the symptoms vanished like mists before the summer's sun. All of a sudden the claims made for it collapsed, and another death blow was given to the value of medical testimony of what eminent men said they actually observed.

Then, too, there was Burgeon's specific treatment in consumption. For awhile medical journals published many cases that were reported cured by this method by honest and eminent men.

Specifics for cancer, cholera, yellow fever and other more or less incurable diseases are frequently announced, and the birth of such a specific is always attended with a report of many cures. Physicians who make these reports do not, as a rule, resort to falsehood to establish their claims, but they are carried away by their own enthusiasm and by the innate vanity to be the first to report cures of cases that are considered incurable.

Oftentimes valuable innovations are made in the treatment of diseases and of surgical conditions, but the first reports are always too sanguine. An instance is the operation of symphisiotomy. When this operation was first re-introduced, judging from the reports concerning it, any one would arrive at the conclusion that the danger of this operation amounted to but little more than that from the application of the obstetrical forceps. In spite of the first favorable reports made, a more extended experience shows that it is not devoid of danger and that unpleasant complications and sequelæ occasionally develop as a natural result of this operation.

The review of every book published, if honestly written, will disclose gross inaccuracies of statement and occasional blunders, even though the writer is of the first rank. In a standard work on surgery, I noticed that the author recommended the assiduous use of atropia in mild cases of glaucoma. Now the truth is that any physician using atropia in glaucoma would be sure to destroy sight; and its use in

* Holmes. Homeopathy and other Isms.

this disease would be good ground to recover damages in a suit for malpractice. The author who recommends this, in my opinion, stands without a peer in the surgical literature of this country.

These facts impress us with the necessity of being constantly on the alert to detect error and to scan everything to the best of our ability, so that we may discriminate properly, and select the truth. Otherwise we will be sure to make colossal blunders by occasionally selecting measures, harmful although sanctioned by men of great reputation.

It is a fact that no two authorities agree in every respect concerning any disease. Students know that in a medical college where two professors hold chairs in the same branch, satisfactory answers to questions, in some instances, depend upon which professor is making the examination. In every discussion before our society, this eternal conflict of opinions and authorities presents itself. The reason of this is obvious. Medicine is not an exact science, and for nearly every disease there are many plans of treatment, more or less helpful or worthless as the case may be. This everlasting conflict compels each physician to rely on his own judgment as to what is harmful in individual cases under his treatment. One would suppose that a drug or therapeutic measure must be of real curative value, to receive the commendations of many different observers, but daily experience tells us otherwise.

It is safe to say that before this year is over, thousands of "new ideas" will be advanced for the cure of disease. Some of these suggestions may reach the dignity of importance. Yet only a few of them will stand the test of time and experience. An honest effort to extend the armamentarium of the physician is commendable. But in these days, commercialism attempts to dictate to the medical profession, and too often are these attempts successful. Annually, hundreds of remedies are brought forward with but one idea, and that is to enrich the men who introduce them. Men with such unworthy aims systematically attempt to bolster up their preparations by the same methods adopted by the patent medicine men in general, and, alas, physicians frequently fall victims to their wiles.

In medicine, honest scepticism is absolutely necessary. To think and to question, are the natural and essential prerogatives of the physician. Any other attitude means not only mental slavery, but the overwhelming of medicine with so much rubbish as to destroy it as an art and distort it as a science. Medical knowledge has a constant tendency to increase by accumulation. As to the material offered, there is but little wheat in much chaff. With winnowing, there will be gain; without it, loss.

INEBRIETY.

WM. H. BURR, M.D., PHILADELPHIA.

In THE MEDICAL AND SURGICAL REPORTER for January 5th, an article on "Inebriety" appears, about which a few comments might be made. The article, on the whole, is a fair criticism of the prevailing tendency to cover our most common vices with the cloak of pathological dyscrasiæ. It never pays, however, to be too positive in any position that has to do with medical science, especially when the point under consideration is one that has vexed the minds and provoked the discussion of some of the ablest thinkers in the science of medicine.

What is called moral law, which is only another term for conscience and religion, will no doubt remedy many of the ills of human life, but though we apply these vigorously we, as physicians, must take into consideration all of the elements that go to make up the causation of our common failings, in order to know where our weaknesses lie.

One of the most logical writers on alcohol, whose name unfortunately we have forgotten, has said that it is the habit of the protoplasmic cells in an alcoholic to consider alcohol, either as a whole or in the form of some of its component parts, as a necessary factor in their autonomy or distribution of energy. This seems to us the most rational theory we have yet seen

as to the physical condition of an alcoholic, and explains the great difficulty which some people seem to meet with in the effort to become cured.

It will appear, however, that in the condition of chronic alcoholism there are two factors to be considered:

1. The habit of the tissues to include alcohol in their formation and distribution of energy.

2. A diminution of energy of the metabolic function, resulting also from habit.

Each cell may be said to have an individual life of its own, and to be subject to the same laws of habit, selection, etc., as is the body as a whole, though the latter may be dominated by the will and by moral law. Though will power and moral law make of the human body one of the grandest works in the animal creation, yet it results in this, that the individual cells are often more helpless than those of the simplest plant or animal.

It is unusual for the simple plant or animal organisms to take into themselves foreign or injurious substances with which they may be brought in contact, either with intention or by accident. The human body, on the contrary, is subject to all the erratic and injurious habits which it may have received by inheritance or acquired by its own vicious preference.

What is habit? Crudely speaking, the tendency to run in grooves or regularly-appointed ways.

If we accustom the muscles of the arm to do only a modicum of work, and that in the simplest manner possible, they will be found incapable of satisfying a sudden demand for greater effort. Alcohol, requiring less effort for its metabolism than its cousin starch, to just such an extent reduces the metabolic tissues to a habit of lesser activity.

The case of a man or woman who has formed the alcohol habit may be said to be similar, though in a lesser degree, to that of a person suffering starvation.

Let us suppose the case of an open boat on the pathless ocean, its occupants suffering the pangs of actual starvation. Does any one suppose that if food presented itself in any form—beast, bird, or fish, palatable or nauseous, it would be refused by the sufferers?

It is idle to reason with a person in that plight; will power, moral law, even religion may fail if opportunity offers. More than one person of the best material, being reduced by starvation, has gorged himself to death in the presence of plenty.

There is no doubt in our mind that many persons, by the simple positive assertion of will power, can at once and forever break away from a degrading and soul-destroying habit that has enslaved them for years. But will any one undertake to assert that the will power is of the same even, strong, calibre in the alcoholic as in the normally constituted individual? The alcoholic is drunk not only in his will but throughout his whole organism.

In regard to the breaking of the alcohol habit, we do not say that it cannot be done, but that it cannot be done easily. One of the best discourses we have heard for some time was a New Year sermon which deprecated the habit of taking it for granted that one could start with a clean page at the turning of the year, and could break the habits of a life time by simply making a resolution so to do. The so called clean page must necessarily be blotted with the habits and mistakes of the past, and every day ought to be a new-year day to all persons who expect to accomplish much.

There is one point upon which we wish to insist, which is that, for the confirmed inebriate, the wholesome (?) license law spoken of is a delusion and a snare.

Though the law makes opportunity somewhat less, the fact remains there is still a pretty large opportunity left, and one single little opportunity may be sufficient to start a landslide.

Personally, we doubt that the removal of the bottle from the household to the club room, hotel and corner saloon has done as much to solve the drink problem as is generally supposed. The writer in consideration himself admits that environment is the principal exciting cause of the habit of drinking, and it seems to us that the environment of a virtuous woman and fond children would have much less likelihood to encourage the sottish vice, than has the gilded saloon or the more dangerous club room.

To conclude, we wish to emphatically proclaim our opinion that the man or woman who carelessly encourages or invites a person who has been addicted to the alcohol habit to take alcohol in any form, is guilty of one of the gravest crimes in the calender, and such an act ought to be punished as would be a deliberate attempt to poison or assassinate a fellow-man.

COMMUNICATIONS.

JACKSTONE IN THE ŒSOPHAGUS: TRACHEOTOMY.

WILLIAM J. TAYLOR, M.D.,* PHILADELPHIA, PA.

A little colored boy, aged three years, was admitted to St. Agnes' Hospital on the 3d of April, 1894, with the following history: He was playing with some iron jackstones when he suddenly began to cough and to struggle for breath. He was seen by Dr. Theo. Sprissler a short time after the accident, who, although no one had seen the boy put the jackstone in his mouth, was convinced that one had been swallowed. He was unable by simple measures, such as the finger in the fauces and holding the child up by the heels, to give relief to the dyspnœa, and the child was then sent to the hospital.

When I saw him first, about two hours after the accident, there was such extreme respiratory distress that prompt relief was necessary. A careful search was made of the mouth and fauces with the finger, but without revealing the presence of a foreign body, and as the dyspnœa was too great to permit of a prolonged examination, I opened the trachea without giving an anæsthetic. As soon as this was done, and it was accomplished without difficulty and with really very little pain to the patient, the relief was instantaneous Nothing could be found in the trachea or bronchial tubes, and a silk catheter could be passed into the mouth from below.

I next passed a catheter down the œsophagus nearly to, but I regret to say not quite into the stomach, and also a pair of long-curved forceps, but without meeting with any obstruction or evidence of a foreign body.

A small silver tube was introduced into the wound in the trachea, and the child was put to bed in a room specially prepared for him.

He was quite comfortable for two days, and during this time Dr. D. Braden Kyle, laryngologist to the hospital, kindly examined the case with me, to determine whether a foreign body was still in the throat. He had the greatest difficulty in making an examination, and all that could be determined was the fact that the larynx was much congested, as though it had been injured.

At first the child was able to swallow fluids in small quantities with comparative ease, but during the time the tube was in place the difficulty in swallowing increased rapidly. He would take a drink of milk eagerly, hold it for a moment, and then allow it to run out of his mouth. I thought that as the child was very small, and the tube somewhat large for him, this was the cause of the trouble, and that the tube was pressing upon the œsophagus from in front. I therefore removed it, and gave the resident surgeon strict orders to replace the tube upon the first signs of returning dysponœa. All went well for about eight hours, when the difficulty in breathing recurred, and the tube was replaced without difficulty. Still the boy did not swallow nourishment as he should, and was losing strength rapidly in spite of rectal feeding.

I now determined to make another and even more careful search of the gullet, first, with my finger, and then with instruments. Upon pushing my finger far down the throat I was just able to feel a smooth, hard body, which proved to be the rounded point of an iron jackstone. By external palpation of the neck nothing could be felt that would lead to the supposition that a foreign body was present. After some little difficulty the jackstone was grasped in the jaws of a pair of curved forceps and removed. The care necessary to do this, on account of the large size and irregular shape of the jack, made it a tedious process. The utmost gentleness was exercised in these manipulations, but the mucous membrane was somewhat torn, for quite an amount of bloody mucus was brought up.

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The child died on April 8th from exhaustion, and as no post-mortem examination was permitted, the extent of the injuries done to the œsophagus and surrounding tissues can only be conjectured.

At the time of my first examination, just prior to the tracheotomy, I could not feel the jack with my finger passed well down the gullet, neither could I feel any obstruction to the passage of the forceps nor to the catheter, which I thought had passed into the stomach. Both must have passed below the point at which the jack was subsequently found.

The interference to the respiration was due entirely to the jackstone within the œsophagus which pressed upon the trachea, and not, as I had supposed before operating, to the jackstone within the trachea itself.

This case has been a severe lesson to me, and has taught me that in all cases of dyspnœa, supposed to be due to a foreign body within the trachea, a careful search of the gullet should first be made, and the probang should be passed into the stomach itself. Until this is done we must not open the trachea, provided this can be done without jeopardizing the life of the patient by too long and exhausting a search.

I can only explain the fact that I did not strike the jackstone with my forceps or with the catheter by the supposition that they passed between the prongs of the jack, and thus did not touch the substance of the iron, or else that it was so far down the gullet that I did not reach it in my search. I report this as a warning to others that such an accident may happen, even when it was thought that all danger of such an oversight had been provided against.

One reason why more stress was not placed upon the fact that no foreign body was discovered at the time of operation was the knowledge that no one saw him swallow the jack, and it was thought possible that it might have been coughed up, and dyspnœa be due to the violence done to the larynx in its passage in and out.

In looking over the literature of this subject I have found the following case reported by Dr. T. M. Markoe (*New York Med. Jour.*, May, 1886), which is very similar in many respects, and I quote it somewhat in detail:

A little girl, aged three years, put an iron jackstone into her mouth and swallowed it. Her mother could feel a hard body with her fingers pushed well down the throat, but a physician who saw her almost immediately could feel nothing. He passed a probang into the stomach, as he thought, but met with no obstruction. The child was first seen by Dr. Markoe four days after the accident, and during this time there had been some little cough, but no dyspnœa or evidence that the child felt local pain other than the fact that she would not swallow solid food, although fluids were taken without difficulty.

A careful examination while the child was under the influence of ether, with a lead probe, detected a foreign metalic substance after the probe had passed five inches down the œsophagus, but there was no evidence of its presence on external palpation of the neck.

Very gentle efforts were made to extract the foreign body with forceps, but without success, and mucus tinged with blood showed the tissues were being torn by the manipulations.

The next day further attempts at extraction were made, and also to push the jackstone into the stomach, but without success. Œsophagotomy was performed on the left side by Dr. Markoe, who found the œsophagus had been perforated, and the jackstone lying almost entirely without the tube, having perforated its wall from within outward.

Whether it had been pushed through the wall in the efforts to dislodge it with the probang or not, it was impossible to say, but it was due to some form of mechanical violence and not to ulceration. The child died of exhaustion twelve days afterward.

Hydrochlorate of Chalk for Pruritus Ani.

Take (*Sem. Med.*) a piece of cotton gauze two or three centimetres long, which has been moistened with a solution of hydrochlorate of chalk, two to the hundred. Push up the anus and leave in place until sharp smarting commences. Then remove it and wipe surface of anus dry. Itching immediately ceases. If it should return, employ the same proceeding. It appears that this solution simultaneously clears up all the eczematous patches about the anus and scrotum, a condition so generally concomitant with an anal itch.

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SATURDAY, MAY 11, 1895.

EDITORIAL.

INEBRIETY—GOLD-CURED.

Some months ago, it will be remembered, THE REPORTER* noted with approval and quoted in full a plan proposed by the editor of the *Christian Advocate* for determining, at least approximately, the truth of claims made for and by the so called Keeley gold-cure of inebriety.

THE REPORTER commended this plan because of: 1, the unimpeachable character of the *Advocate*, and of its editor; 2, its abundant sources for reliable information; 3, the distinctly limited nature of the inquiry; 4, the simple and effective precautions to secure accurate testimony, personally vouched for by the witnesses; 5, the unbiased relation to the subject of the journal.

THE REPORTER regrets it can not reproduce the entire report as contained in the *Christian Advocate* for May 2d, inst., but enough is given to show the righteousness of the investigation; the care used to secure only truthful and pertinent information and, incidentally, to demonstrate that not the most skilled and cunning in the "monkey" business, can use the editor of the *Advocate* as cat's-paws to pull nuts out of a fire. None succeed; few try more than once.

We give an abstract of Dr. Buckley's editorial:

"In order that no part of the following article shall be misunderstood, special notice is given that the object of the editor in investigating the results of the Keeley method is not to prove the system worthless, or to deter drunkards hopeless of restoration by other means from trying it; but simply to ascertain whether the assertion of its inventor and his agents, that ninety-five per cent. of all cases treated are cured, is true."

The Keeley Company appears to us to have placed itself in a peculiar light. Its claims are that more than two hundred thousand persons in the United States have been graduated from Dwight and from the different institutions where the

* THE MEDICAL AND SURGICAL REPORTER, Vol. lxxi., No. 7; p. 217.

Keeley treatment is administered. The secretary of perhaps the most important Keeley Club in the United States writes us that among these two hundred thousand persons are sixteen thousand physicians. Dr. Keeley and all his agents, representatives and friends have been constantly declaring that ninety-five per cent. are permanently cured, and have sometimes gone so far as to say that five per cent. for relapses is a large allowance. Under such circumstances one might suppose that they would be utterly unconcerned and unmoved by an offer on the part of a respectable journal, having nearly fifty thousand subscribers, to receive and publish facts within their personal knowledge, guaranteed to it by ministers and physicians.

Since the company keeps its remedies a secret, no investigation could be made into the elements of which they are composed; but of the careers of persons who have taken the treatment, knowledge can be acquired. But immediately upon the first effort, so far as we know, to test their oft-repeated statements, they deliberately set to work, first to prove that physicians cannot be relied upon to state the simple facts that have come under their knowledge; and second, that of the clergy, "because of the great number who believe it is a sin akin to blasphemy to admit the efficacy of anything save God's grace as a cure for drunken humanity, we think such faith would debar many of them" from being impartial jurymen; and then to show that we in particular are prejudiced against the cure.

We think that when the methods of our investigation are described the reader will conclude that whatever prejudice we have cannot possibly have affected the result.

We have, and still have, a prejudice against Dr. Keeley regarding him as pursuing quackish methods and governed primarily by the desire to make as much money as he can, and believe that that is the chief reason of the keeping of his remedies secret. Having been interested for many years in the reformation of drunkards, we have been in the habit of preserving everything related to the subject.

About thirteen years ago Dr. Keeley sent us a circular, offering for nine dollars to cure drunkenness by two bottles of medicine.

In addition he says: "All medicine packed securely *and sent masked* when so desired."

In the further description of it he testifies: "Up to this time I have not heard of a single instance of failure."

He had then been sending these medicines around the country long enough to make a call for a third edition of this circular; he claimed then to have been using the remedy five years. This is followed by a number of certificates in the usual patent medicine style.

He further says: "I have the fullest confidence in its merits, and feel no hesitation in guaranteeing it to be what the press has already named it, 'An infallible cure for drunkenness.'" He observes, however, that "there may be some cases of failure in the future."

As he signed himself "Surgeon of the Chicago and Alton Railroad and Late Surgeon U.S.A." while resorting to these quackish methods, we wondered whether the phrase "Surgeon C. & A. R. R." signified that he was the general surgeon of that corporation, or whether "Late Surgeon U.S.A." meant that he ever was a surgeon in the regular army, and were informed that, like many other physicians along the line of a railroad, he was employed in case anything happened at the little village where he lived, and that he had been a surgeon in the late war in connection with a volunteer regiment.

We suppose that these special titles were added simply to push his "*infallible* cure" in "two bottles at nine dollars,"

and frankly confess that such a circular with such statements and signatures, created a prejudice in our mind, especially as he repeatedly declared that "the double chloride of gold in my hands has uniformly effected a cure in nine days, and left the patients without a desire for intoxicants or for any stimulant as a substitute, no patient so cured having relapsed into the drinking habit;" and published extracts of letters to himself calling his two bottles "the *saviour* and *redeemer* [italics not ours] of the drunkard's mind and body; because it *saves* him from temptation and *redeems* him from the effects of a dissipated life."

This prejudice did not, however, lead us to conclude that the contents of the bottles might not be valuable, but simply that the inventor had in view the making of money, and therefore was willing to turn aside from the regular profession of medicine and patent his bottles "*in order to protect himself more fully.*" This he had a right to do, but not as a regular practitioner of medicine.

We were the more ready to conceive a prejudice from this cause, that in 1880 he had sent us a circular advertising a medicine which he declared to be an infallible and certain remedy for another disease. This he professes to cure by two bottles which have a thoroughly quackish name, and are sold at five dollars a pair. In the circular is an address to those afflicted, assuring them that if they would buy these bottles and take the medicine they would not need a vacation to recuperate their wasted energies, but could go on with the arduous work of the pulpit and parish, the practice of law, mercantile pursuits, journalism, and politics (it being especially useful to politicians in a campaign, during which "an immense amount of cerebral force is expended"); in fact, the contents of these bottles would "be found more beneficial than three months in the White Mountains or a summer at the seaside."

Considering that for five years he "never knew a failure" of the bottles at nine dollars a pair to effect a permanent cure of drunkenness—"in nine days"—while requiring no one to leave his home or his business, or putting him to any other expense than the purchase of the medicine, and that the other medicine, with its two bottles at five dollars a pair, never failed to cure a terrible disease which Dr. Keeley says "often leads to insanity, epilepsy, paralysis, and dipsomania," we confess that our prejudice increased when we saw him withdrawing from the market the bottles for the cure of drunkenness, and raising the price to twenty-five dollars a week, and requiring three or four weeks' treatment at Dwight, and selling State rights throughout the country at about the rate of $23,000 for a State of moderate population, largely rural; furnishing all the medicine, and getting forty per cent. on all used by each institute, each patient requiring five bottles, at four dollars and fifty cents each, as we are informed by an admirer of the system.

Nor can we say our prejudice was diminished on finding the Keeley Institute of Maine sending to the physicians of that State a typewritten circular, signed by the "president," of which the following is the first paragraph:

"In realization of your high professional as well as social standing in your community, and the amount of force your words would bring to bear upon the unfortunate subjects for whom this treatment is calculated, I have determined, in order that such subjects who require but a word of encouragement from their physician to place them in an institution where they can be lifted from the dreadful bondage which surrounds them and makes their lives a burden, not only to themselves, but their families as well, to give a commission of $15 for every patient (male or female) brought to this Institute for treatment."

Neither was our prejudice favorably af-

fected by finding that whenever a person relapses the plan is to denounce him as an idiot, or demented, or accuse him of not having wished to be cured.

Nor was it removed by the seemingly plausible proposition to allow us to bring drunkards to Dwight to have them treated in order that we might report the effects.

We consider that proposition intended to deter us from making the investigation, or in case of our refusal to put us in the position of refusing what would seem to be a genuine offer.

We do not accept it, because, among other reasons, we do not happen to have on hand a number of drunkards "numerous enough to index general results." And if we had, we could not take them to Dwight, "go with them ourselves, visit every treatment for twenty-eight days, mingle freely with the long line of patients in attendance there, take them home with us, and watch their progress toward a life of sobriety for days, weeks, months, and years."

If the Keeley Cure was just being launched upon the country, it might be reasonable to say to a respectable journal whom the proprietor had interested in his remedy, "Bring on your patients; we will charge you nothing for medicine or treatment, and you can see the effect;" but even then the company agreeing to the terms of this proposition would have to wait some "months or years" before a testimonial would be valuable.

But the Keeley Company claims to have sent out more than two hundred thousand cured men into all parts of the United States.

In our personal acquaintance of those who have taken the Keely cure—not one of whom was demented or did not wish to reform—a little over fifty per cent. have relapsed. The ministers and physicians who have responded to our inquiry have their list of personal acquaintances, and they can tell us what they know.

What is the bearing of the prejudice which we admit, and the growth of which is explained by the preceding facts, on this investigation? Simply this: that, believing Dr. Keeley to be controlled by his pecuniary interests, and of such a temperament as to be capable of making statements with regard to his remedies, as to cures and relapses, similar to those put forth by most other patent medicine venders, we do not place implicit confidence in them nor in the repetition of them by the persons pecuniarily interested in the cure, or by those who derive their information from such persons.

Therefore we endeavored to get information where the persons sending it could not be influenced by pecuniary interests or by an exaggerated condition of mind.

Nevertheless, recognizing the fact that a person prejudiced against the reliability of statistics published by Dr. Keeley, his colleagues and employees, should not be trusted with the tabulation of the returns, immediately after making our first call for facts we instructed the office editor who opens the mail to take entire charge of the correspondence, not exhibiting to us or communicating the contents of any of the letters containing the figures.

Shortly before the date fixed for the closing of the investigation we instructed the said office editor to place in the hands of the editor of one of the subordinate departments of the paper all correspondence relating to the matter, to prepare the same for tabulation.

Finally, we secured two gentlemen, neither of whom is a physician or a minister—one a merchant of long and honorable standing in this city, the other on the editorial staff of the *Popular Science Monthly*, to be present at the tabulation, to examine the documents and to decide in doubtful cases whether statistics should or should not be admitted into the table.

TABULATION OF RESULTS.

Letter No.	Cases.	Held.	Relapsed.	REMARKS.
1..	10	2	8	
2..	3	0	3	
3..	6	5	1	
4..	17	0	15..	One became insane; one died while drunk within six months.
5..	4	1	3	
6..	3	1	1..	One uncertain,
7..	3	1	2..	These two kept sober over two years.
8..	8	8	0	
9..	4	3	1	
10 .	1	0	1..	Relapsed after thirteen months.
11..	3	1	2..	One took cure five times.
12..	5	2	3..	Two took treatment twice.
13..	1	1	0..	
14..	8	0	8..	Two afterward reclaimed by church; five remained sober more than nine months.
15..	1	0	1	
16..	1	1	0	
17..	8	0	8..	Two died; one is insane.
18..	4	3	1	
19..	1	0	1..	Took treatment twice.
20..	4	3	1	
21..	2	0	2..	One committed suicide.
22..	2	0	2	
23..	3	2	1	
24..	8	4	4..	One took cure twice.
25..	10	5	5..	
26..	1	0	1..	Remained sober one year.
27..	7	6	1	
28..	4	4	0	
29..	12	2	10	
30..	3	0	3	
31..	1	0	1..	Has suicidal tendency.
32..	3	0	2..	One took cure three times, is now dead; one insane.
33..	8	0	8	
34..	2	1	1	
35..	2	1	1	
36..	10	9	1	
37..	5	5	0	
38..	11	11	0	
39..	4	1	3	
40..	5	4	1..	One who was cured lost all interest in his work.
41..	5	3	2..	One remained sober two years; one insane.
42..	11	10	1	
43..	2	1	1..	Has since been reclaimed by church.
44..	2	2	0	
45..	3	3	0	
46..	3	3	0	
47..	15	14	1	
48..	8	7	1	
49..	4	1	3	
50..	16	16	0	
51..	1	1	0	
52..	4	4	0	
53..	4	0	4	
54..	2	2	0..	
55..	2	0	2..	
56..	5	5	0..	
57..	1	0	1..	
58..	4	4	0..	
59..	8	8	0..	
60..	6	6	0..	
61..	2	1	1..	
62..	29	7	22..	
63..	5	5	0..	
64..	3	1	2..	One remained sober eleven months one died after drinking.
65..	21	16	5....	Two remained sober one year.
66..	2	0	2	
67..	4	1	3....	One died with delirium tremens.
68..	2	1	1	
69..	2	2	0	
70..	3	0	2....	One died under treatment.
71..	10	1	9 ..	One died with brain trouble; two insane.
72..	6	1	5....	Two treated twice.
73..	10	10	0	
74..	8	1	7....	Two mental and physical wrecks.
75..	10	10	0	
76..	20	19	1	
77..	3	1	1....	One insane.
78..	1	0	1....	Committed suicide.
79..	3	0	3..	One insane and died with delirium tremens.
80..	4	0	4	
81..	2	1	1	
82..	1	0	1	
83..	3	3	0	
84..	5	0	4....	One died insane.
85..	4	2	2	
86..	33	1	32....	One insane.
87..	10	0	10	
88..	3	2	0....	One died in three days insane.
89..	10	8	2	
90..	3	3	0	
91..	2	1	1	
92..	6	0	6....	One took it three times.
	534	275	251..	Thirteen insane; eleven died; two committed suicide; fifty-one and one half per cent. cured.

The letters containing tabulated statistics came from twenty-seven States and Canada.

The communications were ninety-two in number, representing *sixty-eight* clergymen and *twenty-five* physicians. (The statistics given in one letter were certified to by both a minister and a physician.) In no instance did any two letters included in the table come from the same place.

All these persons are subscribers, most of them of long standing, and their correspondence shows that they rigorously excluded all cases of which they had not accurate personal knowledge. The statement in the hostile circular previously quoted, that the number of returns from physicians would be largely in excess of those from ministers, is shown by the returns to be very wide of the mark.

We repeat, in concluding this statement, that our object has *not* been and *is* not to deter drunkards from trying this or any other cure, but to ascertain whether the prospect of being cured is so great as to *warrant men in drinking, under the belief that ninety-five* per cent. of all drunkards can be cured.

We did not believe that to be true, and the facts herewith attested proved conclusively that it is not true, especially as many of the correspondents have shown themselves to be enthusiastically in favor of the cure, and very few have exhibited any prejudice against it.

ABSTRACTS.

PHYSIOLOGICAL PROCESSES AMONG THE POETS.

Some years since, David Barker, a distinguished poet, after the birth of his first child, wrote and published the pretty poem:

"One night as old St. Peter slept,
"He left the door of Heaven ajar,
"When through a little angel crept,
"And came down with a falling star."

"One summer, as the blessed beams
"Of morn approached, my blushing bride
'Awakened from some pleasing dreams,
'"And found that angel by her side."

"God grant but this—I ask no more—
"That when he leaves this world of pain,
"He'll wing his way to that bright shore,
"And find the road to Heaven again."

John G. Saxe, deeming that injustice had been done St. Peter, wrote the following as St. Peter's reply:

"Full eighteen hundred years or more
"I've kept my gates securely fast;
"There has no 'little angel' strayed
"Nor recreant through the portal passed."

"I did not sleep as you supposed,
"Nor left the door of Heaven ajar;
"Nor has a 'little angel' left
"And gone down with a falling star."

"Now ask that blushing bride and see
"If she don't frankly own, and say,
"That when she found that little babe
"She found it in the good old way!"

"God grant but this—I ask no more—
"That should your number still enlarge,
"You will not do as done before,
"And lay it to old Peter's charge."

To settle the dispute, Judge J. W. Starr wrote the following:

"I read of David Barker's babe,
"And Heaven's door ajar,
"And how it came from glory land
"Down with a falling star."

"'Tis said St. Peter gave the babe;
"Saxe doubts the bold assertion,
"And calls upon the blushing bride,
"To make a different version."

"Twixt David Barker and his bride
"This is a sacred cause;
"They know just how the baby came;
"It came by natural laws."

"Saxe writes of lovely summer morn;
"He writes of other things;
"He writes about the good old way
"New life within him springs."

"God grant but this—I ask no more—
"May father, son and bride
"Join St. Peter in the end,
"And John G. Saxe beside."

—*N. C. Med. Jour.*

The Treatment of Influenza.

Sodium benzoate, given in solution, the dose being ten to twenty grains every two to four hours, is one of the best of remedies in cases in which there is much pain in the back, sore throat or tendency to suppression of urine.

Strychnin arsenate or strychnin sulphate, one-half milligram(1/120 grain) every hour or two, not more than eight or ten doses being given daily, admirably supports the nervous system; and therefore the heart. When rheumatoid symptoms exist, the sodium benzoate may be substituted, supplemented or followed, by cinchonidin salicylate, five grains every fourth hour, or until there is ringing in the ears. Rest in bed, warmth, ventilation, simple, easily-digested, nourishing food, plenty of pure water, are all important. Febrile temperature does not, as a rule, call for special interference. The coal-tar antipyretics are not needed and are dangerous.

SOMATOSE—A CONCENTRATED NUTRIENT.

The considerations which chiefly influence the physician in the selection of a food preparation for the sick are, whether it is nutitious in the true sense of the word, containing in small bulk a large amount of available nutriment; whether it is digestible without taxing the gastro-intestinal tract; whether it is promptly absorbed and assimilated; and, finally, whether it is palatable and suitable for prolonged administration.

Careful and extensive experiments seem to have shown that Somatose is eminently adapted for the nutrition of persons suffering from debilitating diseases of acute or chronic character—such as typhoid fever, pneumonia, phthisis, gastric affections—and for the alimentation of weakly children and convalescents. It consists almost entirely of the albumoses or active nutrient constituents of meat, and is digestible, is rapidly assimilated and is relished even by the most fastidious. In view of the large amount of condensed and available nutriment it contains, Somatose is cheaper than other nitrogenous food products—a fact which deserves careful consideration.

Among others, Dr. Weber, of Strassburg (*Berlin, Klin. Wochenschr.*, No. 9, 1895), has recently contributed the results of his experience with Somatose. It appeared to him of especial value in cases of gastric catarrh, ulcer, cancer, etc., when it was desirable to subject the hyper-sensitive mucous membrane of the stomach to as little exertion as possible. He reports a case of gastric ulcer in which, in consequence of the pain produced by solid food, the patient had to be fed with soups and had become greatly reduced in flesh and strength. Somatose was administered in teaspoonful doses several times daily, and notwithstanding the occurrence of a hemorrhage he increased visibly in strength, regained his appetite, and soon was able to resume other light foods. This rapid improvement is ascribed by the author in great part to Somatose.

Infants suffering from gastro-intestinal affections also derived much benefit from the preparation. In cases in which milk was vomited, thin oatmeal gruel with the addition of Somatose, proved an excellent substitute, 1.5 to 3.0 grams being added so a bottle containing 240.0 grams.

Admirable results were also obtained in several cases of severe migraine attended with vomiting. A lady, thirty-five years old, suffered from such attacks, which lasted five or six days, regularly at the nenstrual periods, and as she was unable to take food during their occurrence, her nutrition had become impaired. Somatose, one teaspoonful in a cupful of light black coffee was, however, well tolerated, and was given several times daily. Since the time of its administration the patient experienced much less exhaustion after the attacks, looked better and increased 1½ Kilos in weight.

Weber is convinced of the utility of Somatose in all forms of anæmia both in the anæmic conditions of childhood which are associated with scrofula and rickets, and in the anæmia following the loss of blood or occurring during convalescence from febrile diseases. The conjoint administration of ferruginous preparations and Somatose, in all these cases, produced much better results than the use of iron alone. In convalescence it acted as a nutrient and stimulated the appetite. The author emphasizes the fact, in view of the small quantities required, Somatose is not an expensive preparation as compared with other food products, which even in much larger doses furnish less nutriment to the system.

For the Relief of Painful Swallowing in Phthisical Patients.

Lermoyez (*Journal des Praticiens*) recommends insufflations of the following powder instead of painting with cocaine:

Morphii hydrochlor.....	aa gr. xx
Sacchari lact.....	
Gummi arab.....	gr. xv. M
Fiant pulv	no. lx

Of this powder only about one-half grain should be used at each insufflation.

The application should be made before meals especially, and the effect lasts for many hours.—*Therap. Monathschr.*

OBSERVATIONS ON THE TREATMENT OF FIBROIDS OF THE UTERUS.

Dr. O. S. Phelps, of Now York (*Am. Medico-Surg. Bull.*), reports an unusually complicated case of uterine fibroid in a girl seventeen years of age, who came under his care in July, 1894. She was sent from the West to New York by the family physician to have a hysterectomy performed, and came directly to his sanitarium. The tumor was 8 to 10 centimeters in diameter, and crowded the uterus well over to the left side. The uterine cavity measured five inches and the organ with its appendages was surrounded and bound down by an inflammatory exudate. The bladder was impigned upon so that it could not hold more than one or two ounces of urine, causing the patient great agony to evacuate it. The whole mass, including the tumor, exudate, uterus and appendages, filled the pelvis and rose well up to the umbilicus. The patient was much emaciated, weighed 60 pounds (normal weight, 125 pounds), could not stand or walk, nor could she turn in bed without great pain. Temperature 100° to 103°. Dr. A. H. Goelet was called in consultation and confirmed the diagnosis; he also agreed that no operation could be considered at that time, but thought ligation of the uterine arteries might be resorted to later. The treatment adopted was the high tension faradic current, fifteen minutes thrice daily, vagino-sacral and abdominal. At each seance the temperature was reduced one-half to one degree, lasting one to two hours. A system of feeding was adopted under the guidance of microscopical observations of the blood and secretions to determine the correct choice of foods. In two months the temperature remained normal and the weight had increased 30 pounds. Galvanism was then used with anode to tumor per vaginam by means of a special clay electrode with cathode closely adapted to tumor over abdomen; 20 to 30 milliamperes of current, 7 to 10 minutes, every five days. January 15 tumor was reduced to a mere nodule, about the size of a walnut, exudation gone; uterine cavity measured 2¾ inches. Patient's weight was then 125 pounds.

Conclusions.—The writer ascribes the favorable results in this case—

First. To a systematic plan for restoring the nutrition under such unfavorable conditions as are afforded a sanitarium.

Second. To the persistent use of the high tension faradic current all to allay pain, reduce inflammation and induce absorption.

Third. To the galvanic current, so applied as to concentrate its action upon the fibroid growth.

Losophon a Dermal Antiseptic.

In that large class of cutaneous affections due to bacterial infection, Losophon has been found to occupy a distinct field of therapeutic utility. It is a well recognized fact that these affections present frequently great obstacles in the way of treatment because the microbe penetrates so deeply the epidermis, that it is not readily dislodged.

It is therefore of great importance to first secure a clean field upon which the antiseptic can exert its action. In parasitic diseases of the hairy parts of the body, thorough epilation sometimes is of utmost importance as a preliminary to the use of germicides. After thorough epilation the integument should be thoroughly cleansed with soap and water and dried before application of the antiseptic, and it will sometimes be found of advantage if the parts are very oily, to sponge them with ether or benzine. Iodine and iodine derivatives have long been favorite applications in the treatment of such parasitic affections of the skin as ringworm, and pityriasis versicolor. Losophon, containing as it does about 80 per cent. of iodine, in combination with cresol, an excellent antiseptic, has been found one of our best remedies in this class of cases. It not only promptly destroys the parasite, but alleviates the itching and reduces the inflammation. To obtain the best results, it is not enough to simply mix it with fats, but it should be thoroughly dissolved in oil, before being added to the ointment base. Preparations up to 5 per cent. are usually sufficient, although occasionally stronger ointments may be required.

SOCIETY REPORTS.

PHILADELPHIA ACADEMY OF SURGERY.

March 4, 1895.

Dr. W. J. Taylor reported a case of

A JACKSTONE IN THE ŒSOPHAGUS, WHICH PRESSED UPON THE TRACHEA AND PRODUCED SUCH RESPIRATORY DISTRESS THAT TRACHEOTOMY WAS NECESSARY.

[See page 664.]

DISCUSSION.

DR. JOHN B. DEAVER: I have recently operated upon a lady who swallowed a fish bone, which lodged temporarily in the œsophagus; but which, however, could not be found. Her physician, Dr. J. B. Walker, upon the day following the accident, finding an emphysematous condition of the neck, asked me to see the patient with him. Upon examination I found not only emphysema, but also some fluid deep in the tissue of the neck. The effusion did not connect with the trachea. I cut down upon the swelling, evacuating a small amount of very fetid pus. At the bottom of the wound, located behind the lateral lobe of the thyroid gland, was seen some slough and an opening which communicated with the œsophagus. The bone was not found. The wound was packed lightly with iodoform gauze. Owing to the age of the patient, the difficulty in feeding her, and the extensive sloughing, death occurred within a week following the opening made in the neck.

DR. J. M. BARTON: Some years ago I saw a case over in Camden of a child who had a jackstone in its throat similar to the case reported to-night. The size of the jackstone precluded the idea of its being in the larynx, although there was impairment of voice. The foreign body was discovered pressing against the back part of the œsophagus, where it caused ulceration, from which the child ultimately perished.

DR. DEAVER: I have seen ulceration of the larynx result from the pressure of a foreign body in the œsophagus.

Some years ago I performed œsophagotomy for the removal of a partial plate of artificial teeth which had occupied the œsophagus for seven days. Death resulted from sepsis. Post-mortem showed ulcerative communication between the œsophagus and the larynx.

DR. R. H. HARTE: At St. Mary's Hospital I saw a man, who in a fit of depression had wounded his throat and œsophagus with a razor, and in addition had plunged a red-hot iron into his right side and penetrated the liver. When he attempted to swallow liquids they regurgitated through the wound in the neck. The physicians present suggested œsophagotomy, and I recommended the passing of a tube down the œsophagus into the stomach through which he could be fed. This was done, and the patient recovered.

DR. WM. H. KEEN: I can recall a number of cases of asserted swallowing of foreign bodies, especially fish-bones. The great difficulty in these cases is in determining whether the foreign body is really there. In the cases reported very careful examination failed to detect the presence of the jackstone. I would ask Dr. Taylor if any attempt was made to relieve the patient by feeding him with potatoes, to facilitate the passage of the jackstone. A few days ago I saw a physician who in swallowing a piece of toast, coughed a piece of the crust into his naso-pharynx. Acute pharyngitis followed, which extended up the tubes and caused mastoid disease. An abscess formed which burrowed to the pharyngeal wall. I operated upon him and chiseled away most of the mastoid. I mention this to show how much injury may be done by such a simple body. The man was in good health at the time it occurred.

DR. TAYLOR: Dr. Keen speaks of feeding the child upon potatoes. The difficulty was, that when I saw the child the respiratory distress was so great that I am very sure that unless tracheotomy had

been done at once the child would not have lived more than a few hours. Moreover I had very little idea that there was a foreign body in the œsophagus at all, as I attributed the difficulty in swallowing to the pressure of the tracheotomy tube.

Dr. John B. Deaver read a paper on

THE USE OF MALGAIGNE'S HOOKS FOR FRACTURED PATELLA.

I present these two cases of fracture of the patella as showing the result obtained by the use of Malgaigne's hooks. The hooks were introduced the same day in each case, one week following the fracture. Here, as is my usual practice, the hooks were introduced under aseptic precautions and with the patient anæsthetized. It is now six weeks since the introduction of the hooks, and I think the Fellows will agree with me that the result in each case is most satisfactory.

The degree of flexion and extension is almost normal. The apposition of the fragments is perfect. You will please understand that I have made no claim for bony union, as I believe that this can be obtained only by opening the joint and wiring. The Barker operation, that of subcutaneous ligation, offers no advantage over the use of Malgaigne's hooks, the result obtained in both instances being practically the same, the risk being increased by the ligature method.

DISCUSSION.

Dr. R. H. Harte: I think that Dr. Deaver's testimony with regard to Malgaigne's hooks agrees with the testimony of most experienced surgeons. They have been objected to by persons who have never tried them. Their results are much more satisfactory than those from the starch bandage, recommended by Agnew. I regard them as a very satisfactory method of treatment.

Dr. J. M. Barton: I would like very much to see a series of fractures of the patella about one or two years after the injury. It is very common immediately after any method of treatment to see close approximation, but in time they usually stretch some inches apart. It would be of great importance to determine if exposure of the patella by incision, removal of the interposed torn edges of the capsule and wiring of the patella will not give better results than the use of Malgaigne's hooks. It is certainly quite unfair to the patient to expose him to the risks of the graver operation if the milder will give equally good results.

But the exhibition of patients immediately after getting out of bed proves nothing. If the fractured ends of the patella are equally close one or two years later the efficiency of the treatment will be fully proved.

Dr. J. Ewing Mears: The subject of fracture of the patella is an old one in this academy. It has been discussed here quite often, and a number of cases have been presented. At the time of the last presentation of cases I took occasion to say I thought the time had come to make a reform in our nomenclature. I think the fracture of the patella is not the injury we are called upon to treat; but a rupture of a ligament—the patella being only a sesamoid bone developed in the tendon of the quadriceps muscle, and fractures of this bone are incidental to ruptures of this ligament. When this is the result of force applied directly there is little or no separation of the fragments. But in the cases caused by muscular contraction the ligament is much torn and the fragments are widely separated. This difference in the degree of separation of the fragments under the two causes, I think, proves conclusively that the ruptured ligament is the lesion present demanding treatment, and not the fractural sesamoid bones.

Whatever the plan of treatment adopted, I believe it should have for its object the union of the ruptured fibres in the ligament as firmly as possible. I have kept patients in bed for three months in order to make these adhesions very firm. If the fibres of the ligament are greatly lacerated and stretched it will be necessary to cut down and remove the portions of the torn ligament and approximate the ends by suture. In cases of direct force the ligament is not torn, separation of the fragments of the bone does not occur to any extent, and treatment is very much shortened.

Dr. John B. Deaver presented a case from which he had removed

A TUMOR INVOLVING THE UPPER CERVICAL CORD OF THE BRACHIAL PLEXUS.

B. A., aged forty years, married, was operated upon for tumor of the neck January 17, 1895.

Diagnosis, neuroma. A careful dissection, exposing all the tissues of the neck in relation with the three cervical cords of the brachial plexus, demonstrated the presence of an oblong tumor, smooth in contour, involving the upper of the three cords. The growth was so intimately associated with the nerve-trunk in question that it was necessary to divide the cord on either side to effect its removal. Strange to say, paralysis did not follow the division of the cord; there was but slight motor disturbance.

DISCUSSION.

DR. DEAVER: Some of the gentlemen present seem to doubt the case was really what I claim it to be.

I flatter myself that I am sufficiently familiar with the topography of the neck to recognize the cord of the plexus. There was no doubt that the tumor, which when examined proved to be a neuroma, was so intimately connected with the upper cervical cord that to remove it required section of the cord above and below the growth.

An attempt was made to splice the divided ends of the nerve, but it could not be done. They were connected, however, with several strands of catgut.

The apparently puzzling part of this case is the absence of paralysis following removal of the tumor.

When we consider that this growth first showed itself seven years ago, and that it has been as large as at the time of its removal for some months, and that it involved the entire upper cervical cord of the plexus, as proven by examination of the specimen, would we expect paralysis to follow the removal of that which had already destroyed the conducting power of the affected cord?

DR. KEEN: With regard to the brachial plexus, I am willing to take Dr. Deaver's word that it was the brachial plexus nerve tubules which were identified. I should like, however, to see the specimen. But it is very remarkable that we can cut away a growth dividing the cord without having paralysis. I should like to know if the tumor is sessile upon the nerve, or the nerve was diffused and a part of the tumor. It is incomprehensible to me that there should be compensation in the case. As I understand, there are no motor symptoms whatever.

DR. MORTON: Did the nerve present any evidence of degeneration, or was there anything to account for the formation of the tumor?

DR. DEAVER: In answer to Dr. Keen, I would refer him to the anatomical construction of the brachial plexus.

In answer to Dr. Morton, I would state that the history of the case does not offer any explanation as to its causation.

Dr. Deaver presented a case illustrating a very marked form of congenitally contracted bladder. The trouble, that of frequent micturition, dates back to three years of age. The capacity of bladder when he came under my notice was about one and one-half ounces. Examination of the urethra with urethroscope and of bladder with cystoscope negative other than demonstrating the small size of the bladder. Perineal cystotomy gave relief while drainage-tube was *in situ* and for two months after the wound had healed, he now returns six months since the operation with the symptoms quite as bad as when I saw him for the first time.

DR. GEORGE E. SHOEMAKER: Has an attempt at persistent dilatation of the bladder been made?

DR. KEEN: Would the H. Marion Sims operation be of use?

DR. JOHN B. ROBERTS: Might not this be a case of chronic tuberculosis of the mucous membrane of the bladder? I did a supra-pubic operation some years ago for what I think was tuberculosis of the bladder, leaving the wound open and washing it out with boric acid. A fistule remained a long time, and the washing caused a small calculus in the bladder. This was passed by the urethra after dilatation with bougies. I dilated the sinus and curetted it, and then lost sight of the patient. In this case the bladder wall was very contracted, and I had great difficulty in finding and opening the small bladder.

DR. KEEN: In order to make such a method of treatment effective it should be done when there was no drainage-tube in the bladder. I should advise a trial of systematic dilatation of the bladder as recommended by Sims. I think that the water should be left in. Otherwise, the only treatment would be a palliative one by wearing a urinal.

MR. PRESIDENT AND FELLOWS: I am prompted first to report the following case from the fact that it is one of the youngest patients from which so large and solid a malignant growth of the ovary has been removed successfully. In going over the literature of the history of abdominal section in children for the removal of ovarian tumors I find this to be the youngest patient from which so large a sarcoma of the ovary has been removed, and further that nearly all of the operations which have been done were for ovarian cyst or dermoid.

In the case I report there was neither precocious menstruation nor evidence of premature sexual development.

In an article by J. Halliday Croom, *Edinburgh Medical Journal*, vol. xxxviii, there is a tabulated report of the cases operated upon up to 1893, gathered from the available literature. These cases are recorded under the following heads, viz.:

1. Precocious menstruation, with an early appearance of the external manifestations of puberty.
2. Sexual development without menstruation.
3. Menstruation previous to development of the sexual organs.
4. Early conception and pregnancy.
5. Premature sexual development, associated with tumors of the generative organs.

On December 20, 1894, I was asked by Dr. W. O. Higgate, of West Philadelphia, to see the patient in question, M. B., aged six years, white, female.

Dr. Higgate first saw the patient on the evening of December 18th for a pain in the stomach, so described by the mother. Upon palpating the abdomen Dr. H. discovered an abdominal tumor. There is no history prior to this date, excepting that three months previous the child complained of a pain in the side, which lasted for a few hours, and was relieved by home remedies. She was going to school up to and including the date when first seen. The pain she was suffering from on December 18th was due to suppression of urine; one ounce of urine was secreted in the succeeding twenty-four hours; this was drawn by catheter. After this the amount gradually increased for a week, when it reached the normal amount. At my visit the child was anæsthetized, and the examination showed plainly the presence of a large solid tumor occupying the pelvic and lower half of the abdominal cavities. Examination per rectum gave the impression that the growth was ovarian. December 22d Dr. John Ashhurst, Jr., saw the case with Dr. Higgate, and examined the child under ether. The diagnosis of ovarian growth was concurred in.

Operation, December 27th. The points of interest in connection with the operation were the ensiform adhesions of the great omentum, the transverse colon, and the sigmoid flexure of the colon. Numerous ligatures were required in separation of the adhesions. The growth was delivered with difficulty; there was free bleeding from the floor of the pelvis, which was, however, promptly controlled by ligature. During the necessary manipulation the field of operation was walled off with gauze, which facilitated the rapidity of the procedure and further lessened the degree of shock. The pelvis was dried with gauze, and glass drainage introduced. Wound closed and dressed aseptically. Recovery uninterrupted.

DR. H. R. WHARTON reported a case of

EXCISION OF ELBOW-JOINT FOR FRACTURE OF CONDYLE OF HUMERUS, WITH POSTERIOR DISLOCATION OF THE BONES OF THE FOREARM.

Mrs. W., aged thirty-five, received a fall April 29, 1894, sustaining an injury of the right elbow, which was diagnosed as a dislocation with fracture of the condyles of the humerus. She was sent to me in October, 1894, and upon examination of the arm I found marked deformity in the region of the internal condyle of the humerus and a posterior dislocation of both bones of the forearm, the arm being rigidly fixed at a right angle, and the patient complained of constant pain in the elbow.

I advised excision of the elbow-joint as the operation most likely to give her a useful arm.

On November 8, 1894, I excised the right elbow-joint, finding that there had been a fracture involving the internal condyle of the humerus, and that the ulna and radius were dislocated backward, a large amount of callus had been thrown out, which made the operation a difficult and tedious one.

The patient did well after the operation; the wound healed promptly, and at the end of four weeks the patient had a fair range of motion in the new joint. You will notice on examining the arm that the patient has remarkably free flexion and extension of the arm, also good supination and pronation, and as the result of operation has attained a very useful arm.

ALSO A CASE OF LOOSE CARTILAGE IN KNEE-JOINT.

J. W., aged twenty-four, was sent to me with the history, that for some years he had suffered from a movable body in the left knee-joint which at times interfered with the motion of the joint.

He stated that four years ago he had wrenched his left knee by stepping upon a stone which rolled under his foot, and that after the accident the knee was bent and could not be straightened. This condition existed for four months; at the end of this time he regained use of the knee-joint, but noticed the presence of a body which moved about in motions of the joint, and at times entirely disappeared. At times its presence caused him more or less disability.

I had no difficulty in locating the position of the body, and after finding it, cut down upon it and removed it. I show the body removed, which is quite a large-sized one.

This case is of interest in that it points to the possible traumatic origin of some cases of loose cartilages in the joints. They are usually supposed to originate from the villous fringes of the sigmoid membrane; but some authorities, such as Paget and Teale, have contended that they might originate from detached portions of the articular cartilage of the joints.

DR. JAMES M. BARTON, recited some

UNUSUAL SYMPTOMS ACCOMPANYING A SMALL OVARIAN CYST.

I present this evening this small ovarian cyst, as it produced a very unusual train of symptoms. I removed it yesterday from a private patient, and present it now before decay or any attempt at preservation destroys any peculiarities it may possess.

Miss L. J., a patient of Dr. William L. Newell, of Millville, N. J., aged twenty years, and weighing 257 pounds, was taken ill with vomiting and purging October 14, 1894. Previous to that date she was in perfect health, but during the five months since that date she has been seriously ill. She has had a very heavily coated tongue, a foul breath and constant nausea. Her temperature varied from 99° to 100°, and occasionally rose to 101° and 102°. She has lost just exactly fifty pounds in weight. There was great pain and marked tenderness in the right iliac fossa. She kept the right leg constantly flexed. She could straighten it, but, as it greatly increased the pain in the right iliac fossa, she would soon again flex it. The loss of appetite was so marked that frequently for several days in succession she took no food whatever. During a period of ten days in November she and her mother both assure me she did not take a mouthful of food. Since then there were two other periods of eight days each in which she also took no food whatever. Some days she even took no water. She slept but little, owing to the constant pain.

The large amount of fat on the abdominal walls prevented anything being felt through them, though the patient complained greatly of tenderness when pressure was made in the right iliac fossa.

On vaginal examination a fluctuating, sensitive tumor was found low down in the right iliac fossa. It was some inches from the uterus, and, apparently not connected with it.

On different vaginal examinations made during the last few weeks the tumor occupied different positions; usually it was found low down in the right iliac fossa, twice it was in the median line, once to the left of the median line, and twice it could not be felt at all through the vagina. The maximum tenderness was always over the tumor when it could be found.

The patient was regular in her menstruation, her periods occuring every twenty-one days. Her bowels were slightly constipated but were otherwise normal.

At the operation, March 3, 1895, I found the growth to be a kidney-shaped multilocular cyst of the right ovary, a little larger than an adult fist. There were two points of strong omental adhesion, and the pedicle was nearly four inches in length.

The parietal peritoneum at the lower part of my incision, which was a median one, was greatly thickened, though not roughened or discolored. There were a few ounces of fluid in the peritoneal cavity. The appendix and its surroundings appeared to be in a normal condition.

There was no twist of the pedicle, and the strong omental adhesions, which evidently had existed for some time, would have prevented any great rotation of the tumor and pedicle.

March 28, 1895. The above described case has made an uninterrupted and complete recovery, and is now sitting up daily for some hours. All of her symptoms have left. Her appetite is good, there is no nausea, she sleeps well, and there is no tenderness in any portion of the abdomen. She is able to extend the leg fully and keep it extended indefinitely without discomfort.

Dr. R. H. Harte exhibited a patient, remarking: This man came to the Pennsylvania Hospital in December, 1893, with a small growth at the inner canthus of the eye. Dr. Harlan then removed a small portion, including the duct. In March, 1894, a section was removed and pronounced epithelioma. In June the growth was again removed. In November Dr. Packard removed a portion of the growth. When I took charge of the ward, five weeks ago, I found a rather ulcerated mass corresponding with the malar eminence, which was discharging pus. I advised removal of the superior maxillary bone, which I did. I removed the outer wall of the antrum and scraped the inner wall. I had to take a flap from the side of the face and also a flap from the forehead. He made a good recovery, returned to work on a farm, and has gained twelve pounds in weight. An interesting question is, what was the nature of the case? Although the microscopic examination pronounced it a case of epithelioma, I am inclined to think it was a case of rodent ulcer; this view being favored by the fact that there was no glandular infiltration.

Treatment of Vomiting and Gastric Irritation

Dr C. H. Miles recommends (*Clin. Jour.*) the following:

Creasot. arg..... m. j
Aqua..... oz viii

M. To be well shaken and a teaspoonful taken every five minutes.

A Severe Case.

Two weeks ago I was summoned to the bedside of Djoahnne Sdtleometzhler. The involute and labyrinthinate tangle of his symptoms made me suspect at first that he had absorbed his own name. But further examination convinced me that he was the victim of typhomalariopneumophthisicotrychinotetanoataxionephreticosplenitis. Owing to the ubiquity of pathogenic bacilli, antiseptics are always indicated, so I exhibited calcium betanaphtholalphamononosulphonate. As the patient suffered from severe non-localized pain I gave orthooxyethylanamonobenzoylamidoquinoline combined with salicylaldehydmethylphenylhydrazine. For his insomnia I gave trichloraldehydphenyldimethylpyrazolene.

His wife asked me what ailed him and what I was giving him. I told her, and she said "yes," and turned very pale.

Upon examining him on the next morning I became convinced that the vital forces had misconstrued the remedies, and that a congerie of retro-absorptions had resulted. I then wrote out the following prescription:

Tetrahydrobetanaphtholamine,
Sodium thioparatoluidinesulphonate,
Orthosulphamidobenzoic anhydride,
Amidoacetoparaphenetidine aa ʒ j.

M. Sig. A teaspoonful every hour.

When the wife presented the prescription to the druggist he instantly dropped dead! The patient is up and about, but something is wrong with his Broca's convolution—he mutters in a multi-syllabic lingo that is intelligible only to modern pharmacal chemists. I am in hiding where the spiral melody of the woobine that twineth blendeth ever sweet, low, soothing, murmurous quadrisyllabic rhythmic rune of the gentle polygonum punctatum.—Dr. Cooper, in the *Medical Gleaner*.

Immunity to Tetanus Induced by Establishing Strychnia Tolerance.

Rummo, the Italian investigator, has recently shown that strychnia, which produces physiological effects very similar to those of tetanus, may be used as a means of establishing immunity in guinea-pigs against infection of tetanus. After establishing a moderate degree of tolerance to strychnia, guinea-pigs were injected with tetanus culture, which was found to be ineffective in most cases, only slightly operative in others, while the controls all died.

THE LIBRARY TABLE.

BOOK REVIEWS.

DISEASES OF THE SKIN; AN OUTLINE OF THE PRINCIPLES AND PRACTICE OF DERMATOLOGY. By Malcolm Morris, F.R.C.S., Surgeon to the Skin Department, St. Mary's Hospital, London, etc. In 12mo, volume of 572 pages, with 19 chromo-photographic figures and 17 engravings. Philadelphia: Lea Brothers & Co. 1894. Cloth, $3.50.

The name of Malcolm Morris is so identified with dermatology that a brief reference to his latest production will insure its recognition by the profession. This work is essentially new and is designed to be both clinical and practical in its scope The chromo lithographs add much to the value of the book, and are well executed. W. H. P.

BLOODSERUM-THERARY AND ANTITOXIN. By George E. Krieger, M.D., Surgeon to the Chicago Hospital. With illustrations. 52 Randolph Street, Chicago: E. H. Colegrove & Co., publishers. Price, $1, net.

Krieger's book on Bloodserum-Therapy is written to introduce the practitioner into the details of the doctrine of Bloodserum-Therapy, the modern method of treating infectious diseases, and to explain the effect observed in the use of antitoxin. It also gives the bacteriologist directions how to prepare the remedy. The text is divided into four chapters, the first speaking on Bloodserum-Therapy in general, its meaning, history and value in medicine. The second chapter reads on the subject of toxins and toxalbumins, the poisonous products of pathogen microbes. The third refers to the use of antitoxin in tetanus, this being the first infectious disease on which the effect of antitoxin has been studied. The subject of the fourth chapter is diphtheria. In reference to this disease special attention is given to the practical administration of the diphtheria-antitoxin, including some valuable suggestions as to the successful use of the remedy.

The book contains 70 pages and 7 half-tones, representing microscopical specimens of various microbes. Bound in full cloth.

ANTISEPSIS AND ANTISTPTICS. By Charles Milton Buchanan, M.D. with instructions by Professor Augustus B. Bernays. Newark, N.J.: The Terhune Company. 1895.

A book of 352 pages. The first 46 pages are devoted to the history of antiseptics from before the Christian era to the present time. Then follows a consideration of the products of vital cellular and bacterial activity, infection, susceptibility and immunity.

The major part of the work is occupied in the enumeration of the various antiseptics, giving their relative values in general medicine, surgery, obstetrics and gynecology. The closing chapter includes the essentials of antiseptics and asepisis with a correlation of opinions from the leadiug surgeons of the age, as to the proper dressings for surgical wounds. W. H. P.

THE THERAPEUTICAL APPLICATIONS OF PEROXIDE OF HYDROGEN (MEDICAL), GLYCOZONE AND HYDROZONE. By Charles Marchand, Chemist. Ninth Edition.

This pamphlet of 200 pages, contains full information on the subject, with elaborate reprints of articles by authoritative contributors to medical literature. It will be mailed free of charge, to physicians mentioning this publication, and sending full address to Charles Marchand, 28 Prince St., New York.

DOSE-BOOK AND MANUAL OF PRESCRIPTION-WRITING WITH A LIST OF THE OFFICIAL DRUGS AND PREPARATIONS, AND ALSO MANY OF THE NEWER REMEDIES NOW FREQUENTLY USED, WITH THEIR DOSES. By E. L. Thornton, M.D., Ph.G. Philadelphia: W. B. Saunders. 1895. Price, $1.25, net.

The aim of the author has been to compile a work of value for both student and practitioner. The composition and strength of all official preparations intended for internal administration are given, together with their solubilities and incompatibilities.

Weights and measures are also considered giving the method of converting the English into the metric system equivalents, and the doses throughout the book are conveniently contrasted in both these systems.

Considerable space is devoted to the grammatical construction of prescriptions, a feature in the art of medicine, of which only too many practitioners are grossly ignorant.

The work is based upon the standard authorities such as the U. S. Pharmacopeia, U. S. Dispensatory and the National Dispensatory, etc.

It will find a place not only with students and beginning practitioners, but makes a convenient reference for men of riper experience.

NOTES ON THE NEWER REMEDIES. By David Cerna, M.D., Ph.D. Second edition. Phi adelphia: W. B. Saunders, 925 Walnut Street. 1895.

The medical press describes from time to time the new remedies, and in cases reported they are also mentioned, but the author has here brought them together in one volume, briefly defined each drug and given an account of its physical properties, physiological action and its therapeutic uses.

The doses are given in the English and French systems of weights and measures.

THE DISORDERS OF SPEECH. John Wyllie, M.D., F.R.C.P.Ed. Edinburgh: Oliver and Boyd. Tweeddale Court.

From October 1891 to May 1892, there appeared in the Edinburgh *Medical Journal* a series of papers which proved to be so valuable that they are now presented to the medical profession in book form. The first part of the volume is devoted to the functional disorders of the speech mechanism. The second part treats of the development of speech and its

mental derangements. The third part describes the diseases of that portion of the nervous system devoted to the production of speech. The book is well illustrated with comparative tables and colored plates.

J. O.

SEXUAL NEURASTHENIA. By George M. Beard, A.M., M.D. Edited by A. D. Rockwell, A.M., M.D. Fourth edition.

In the present edition there is found a new chapter on sexual erethism. The victims of this complaint the editor does not classify with sexual perverts, of whom he says that although a certain few would be glad to be free from the chains that enslave them and seem to be eager for aid, yet the larger proportion are as depraved as the followers of any ordinary form of vice. The physician is compelled to treat these people no matter how distasteful it may be to himself and there is no class to whom so much aid can be given if common sense be combined with good treatment, as to the sexual neurasthenic.

O.

LABORATORY GUIDE FOR THE BACTERIOLOGIST. By Langdon Frothingham M.D.V. Philadelphia: W. B. Saunders, 925 Walnut Street. 1895.

This little pamphlet is intended for use on the laboratory table. Bacteriological technique is briefly described. Directions are given for staining bacteria in cover-glass preparations and insections. The special stains for certain bacteria are given. The last few pages are devoted to the preparation of nutrient media, and the description of imbedding tissue for cutting sections.

TABULAR REVIEW OF ORGANOGRAPHA. By A. L. Benedict, A.M., M.D. Buffalo.

This is a small pemphlet of 21 pages, intended primarily for the use of the classes in the Department of Pharmacy, University of Buffalo. There is, however, nothing to limit its use to any locality or class of students. The little work is not a text book, in the ordinary sense of the word, but is designed to be used with some other botany (Bastin's is especially mentioned by the writer). Running his eyes over the conveniently-arranged tables, the student has a bird's-eye view of the whole subject of structural botany and any point with which he is not familiar he can find defined in the standard manuals. Almost every technical term is exemplified by naming some common plant, and space is left for the addition of other examples by the student. Thus, the Review is especially adapted for use as a guide in field study, and in this particular it is almost without a rival, there being a decided need for some brief, portable reference work for the student who wishes to examine plants in the natural state and to be sure that he has omitted no detail of their structure. Copies can be ordered of the author, and they will be sent postpaid at 25 cents each.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M D.

MEDICINE

The Oyster and Typhoid Fever.

Many foods and drinks have been accused at various times of harboring the germs of typhoid fever and giving them up to unsuspecting man; and now, last of all, the succulent bivalve, the oyster, the pride of Maryland, and one of the most important edibles in this gastronomic center, has been accused in other states of giving typhoid fever to those who like the oyster even when transplanted. Many an innocent one has suffered from the guilt of others and here good, fresh, harmless oysters have been taken from their native salt waters and transplanted into fresh, tainted and contaminated rivers, with the result that disease and perhaps death have been brought.

Most germs flourish very badly or not at all in salt or brackish water, and it is only when the oyster is taken from its home and carried to other parts or when it has been too long out of the salt water that it becomes an object of danger. In fact it is like almost every other food in that it is best enjoyed in its native place. The moral of this wholesale poisoning should be a lesson to consumers of oysters to see to it that what they use is obtained from reliable dealers and to beware of salt water food taken too far from the waters. In Germany it is against the law to sell certain varieties of fish except when alive.—*Maryland Medical Journal.*

Apoplexy and Thermogenesis.

Dr. Charles L. Dana concludes his observations as follows:

1. That all intra-cranial hemorrhages, whatever be their lesion, are much more apt to be accompanied with immediate disturbances of temperature than are necrotic processes from embolism and thrombosis. These temperature disturbances in hemorrhages are, in rare cases, a sudden initial fall; then in almost all cases except where the lesion is small, there is within a day or two a rise of temperature of from one to three degrees. On the other hand, in acute softening this initial fall and early rise do not occur unless the process is very extensive or involves the pons.

2. In apoplexy due to hemorrhage, the temperature is greater upon the paralyzed

side than on the normal, the difference averaging about one degree. In acute softening this unilateral difference of temperature does not occur or is extremely slight.

3. The rise in temperature due to apoplectic lesions depends more upon the extent and nature of the lesion than upon its location. Lesions of a hemorrhagic character in the cortex, however, are especially apt to cause a rise of temperature. Lesions in the pons also either of hemorrhagic or softening character, almost uniformly cause a rise of temperature.

4. There is as yet no clinical evidence that lesions of ths basal ganglia or the parts about them cause temperature rises on account of destruction of certain thermic centers; in other words, the clinical and pathological evidence of thermic centers in the human brain, aside from the parts mentioned, is yet inadequate.

5. Finally, I would specially impress upon you the great value, from a diagnostic point of view, of a careful study of the temperature changes after apoplectic strokes. The temperature should be observed on each side of the body, in the rectum, also, if possible. With data thus obtained one can, I feel sure, gain much more positive evidence as to the nature of the lesion in these cases, and I have repeatedly been able to satisfy myself, in my clinical work, of the nature of the lesion by means of the methods referred to. I do not believe that with the help of the numerous factors which we now have in aiding our diagnosis there are many cases of apoplexy in which it is difficult to make a diagnosis. The old-time tabulation of differential points in diagnosis between hemorrhage and acute softening still remains of value. We need, and must use, all the helps possible; but if we, in addition to other methods, carefully apply the thermometric, I am sure we can reach vastly more satisfactory results.

The Use and Abuse of Toothpicks.

The exciting causes of caries of the teeth are invariably external, and among these decomposition of food or of mucus between the teeth holds a prominent place. It follows that removal of such matter must be beneficial. One of the means of accomplishing this is the toothpick, which, judiciously used, is of undoubted value. Food lodges between the teeth form a variety of causes: The extraction of a tooth may lead to those contiguous falling apart and so leaving spaces; improperly filled teeth, such as those left with rough edges and not sufficiently "contoured," that is, built up to the original configuration of the lost part, will form food traps; irregular position of the teeth or recession of the gums—all these will act in the same way. Attention to the dental toilette before company is certainly inelegant, but it is not necessary here to approach the subject except from a medical point of view. Of the materials used as toothpicks the best is the quill with the sharp point removed, but with this, as with all other forms, care must be observed. By indiscriminate application the gums may be so irritated and injured as to cause recession and thus increase the exciting trouble, or inflammation of the tooth membrane may be caused, a most annoying condition, and one in which the still more vigorous use of the toothpick gives temporary relief, only in reality to add fuel to the fire. Metal toothpicks are good because blunt-pointed, but are too thick to pass between teeth at all close together. Wood need only be mentioned to be condemned, for it is a by no means uncommon occurrence for small fibers to become detached and jammed between the socket and tooth, leading to chronic periostitis and even loss of the tooth if the condition is not recognized. An excellent substitute for the toothpick, one having few objections and one which will save many a visit to the dental surgeon, is antiseptic, waxed, dental floss silk, which, passed between the teeth night and morning, will invariably reveal accumulations which have escaped the tooth brush.—*London Lancet.*

The Relation of Hysteria to Insanity.

Dr. Ballett, of Paris, in *Gaillard's Medical Journal*, says that all the mental disturbances of hysteria are not due to it alone, for its association with unsoundness of mind and the fact of a common origin, heredity, he is pleased to consider the changes in the mental machinery almost identical in both, but while so closely allied and often combined they are yet each a distinctive disorder and should be treated as such; and for want of the recognition of this fact, hysteria has often been assigned as the cause of many morbid mental changes for which it, in truth, can not claim an incipient parentage.

Hysteria, while a mental disease, is a too easy or active association of ideas, for those which preside over the manifestations are independent of consciousness and, therefore, there are present two personalities: one the aggregate of the subconscious phenomena, and the other the conscious personality, perverted in part by the effect of the former; thus, by the division of the ego into two separate activities, there may arise from an unconscious impulse a mirrored prototype of the past as observed in the normal physical life.

External Application of Guaiacol in Fever.

S. T. Bartoszewicz, of Professor Lomikovsky's clinic, in Kharkov (*Yujno-Russkaia Meditzinskaia Gazeta*) has used guaiacol externally in eleven febrile cases (four phthisis, two pleurisy, two typhoid, one pneumonia, one pelosis rheumatica, one intermittent), the number of experiments amounting to sixty-five. At first he rubbed the drug with soft flannel into this or that cutaneous area, about five square decimetres in extent. In spite of his using only gentle pressure, the application always gave rise to local dermatitis, with superficial ulcers and scurfing. This complication led him to abandon the frictions in favor of a novel method devised by himself. A piece of linen three square decimeters in size, soaked with twenty-five or thirty drops of pure guaiacol, was applied to the

forehead, back of the neck, or upper part of the chest, then covered with wax-paper, fixed by a bandage, and left *in situ* for one or two hours. It was found that such compresses had exactly the same antipyretic effects as the inunction, while they caused no cutaneous irritation beyond a slight redness. The principal results of the clinical research may be summarized as follows:

1. Of sixty-five cases, only in five the results were *nil*, and only in nine the temperature subsequently rose to the primary height. The maximum effects (2.5° to 3° C.) occurred in phthisis, the depression in a majority of cases varying between 1.2° and 1.5° C.

2. The drug does not give rise to collapse, even in phthisical subjects with large cavities. In these patients, however, the application is almost invariably followed, in from two to four hours, by perspiration and rigors.

3. Compresses are the best mode of application.

4. Chemically pure crystalline guaiacol should be preferred to the ordinary fluid preparation, since it allows a better dosage and does not irritate the skin, even when rubbed in.—*British Medical Journal.*

The Mechanical Treatment of Chronic Constipation.

Dr. F. E. LeMarinel believes (*Jour. de Med. de Chirur. et de Pharmacologie*), that the mechanical treatment should be the treatment of choice in a large number of forms of chronic constipation. The manœuvres of massage comprise three forms—frictions, pressures, and percussions. In addition, various, active and passive movements are undergone—flexon, extension, abduction, adduction, paronation, supination, rotation and circumduction.

The various forms of constipation which are likely to be benefited are: (1) From anæsthesia of mucous membrane; (2) from muscular paralysis; (3) from induration of the stools, and (4) from mechanical obstacle. The contra indications are: (1) Acute inflammation of intestines, peritoneum, peri-intestinal cellular tissue, or of intra-abdominal veins; (2) ulcerations (round, tuberculous) of stomach or intestines; (3) tumors of the alimentary canal (sarcomata, carcinomata, polypi); (4) voluminous fæcal masses of stony hardness. An interesting comparison is given of the value of diet, habit, purgatives, hydro therapy, injections, electricity, various medicinal methods, with that described by the author, the general conclusion being that of all these methods only one can be compared to the mechanical, and that one is electricity. But when one considers the question from the standpoint of success, massage shows figures which are not surpassed by electricity. As to facility of application, massage is superior in that it does not require any apparatus, and can be applied equally well at the house of the patient as at the office of the physician. Further, massage is better borne than electricity, and particularly by children. A series of 147 cases are reported, the treatment being that advocated in the paper. The care shown in the report, the apparent accuracy of diagnosis, the fullness of detail, give an especial value to the clinical histories. In the cases cited, those of the synoptical table, and eleven in detail, 158 in all, radical cure was obtained in about 90 per cent. The final conclusions are:

Mechanical treatment takes rank among those therapeutic agents whose action is most energetic upon the circulation, the respiration, and general nutrition. It can modify the abdominal circulation, and cause certain foreign congestions, notably those which are met with in abdominal plethora, to disappear. Under its action the muscles acquire an increase in volume and strength. It is the best curative agent in constipation dependent upon muscular paresis or paralysis not of central nervous origin, or upon diminished sensitiveness or anæsthesia of the mucous membrane due to local causes. Finally, it is formally contra-indicated when constipation is due to acute inflammatory lesions or to tumors.

Treatment of Certain Gastric Affections.

From a recent article of Dujardin-Beaumetz (*Bulletin General de Therapeutique*) and quoted from *The Therapeutic Gazette*, we cull the following: Every individual suffering from disease of the stomach in whom there exists a true arrest of gastric function, or a tendency to such a condition, should on going to bed lie on the right side, in order to facilitate the passage of the food into the duodenum. Lying on the left side gives rise to the formation of a large amount of gas, accompanied by a regurgitation into the œsophagus of the products of digestion. Patients should make use of warm drinks. The usefulness of these is evident; in fact, warm water is one of the best means to excite muscular contractions in the stomach, but it is liable to cause vomiting. It is therefore preferable to administer infusions of chamomile, anise seed, or some other similar aromatic substances, and as warm as thay can be borne. In these cases the ingestion of mineral waters is likewise useful. Alkaline waters in small doses, half an hour to an hour after meals, increases the secretion of gastric juice and its acidity; hence their advantage in cases of dyspepsia attended with a subnormal amount of hydrochloric acid in the gastric juice. Even in those cases where there is an excess of this acid, the alkaline waters do good, and in these instances through a different mechanism: they influence the mucous membrane of the stomach, so as to diminish its congestive and inflammatory condition, which is often the origin of the hyperacidity. The same may be said in regard to the use of bicarbonate of sodium, which should be administered during or after meals. A very good adjuvant in these cases of slow digestion is massage; this measure not only enhances muscular contraction of the walls of the stomach; but also increases the secretion of gastric juice, and manifestly modifies for the better chemical changes during digestion.

The Physical Diagnosis of Gall Stones.

Gebhardt observes that the attack usually begins four or five hours after the chief meal, that is, shortly after the entrance of the stomach contents into the duodenum. According to the size and position of the stone after it has passed into the common bile duct, distention of the gall-bladder may be recognized at once, or later (when the gall-bladder has been copiously filled, or not at all). The swelling lies between the right parasternal line and the interior axillary line, mostly a little to one side of the right rectus muscle. If the gall bladder is much distended it may give rise to errors in diagnosis. This distention only takes place in a minority of the cases. It may be absent owing to the smallness of the gall-bladder, or to the obstruction being incomplete, or lasting too short a time. It occurs in severe attacks, or in those who have had repeated attacks The commencement of the attack may last a couple of hours without pain, during which time the gall-bladder may be palpable. The shrinking of the swelling shows the end of the attack.

This is due to local peritonitis, and it explains the continuance of pain. An ice-bag is more useful here than warm applications. The liver may swell after severe attacks and fever be present. Attacks may occur with pain and fever, but there is neither swelling of the gall-bladder nor of the liver, and no stone is found in the stools. It is thought that the stone slips back into the gall-bladder but other possibilities exist. The swelling of the gall-bladder may be due to obstructions having other causes, but it does not occur in cardialgia, nor in heptic colic of purely nervous origin. This latter is observed in tabes, hysteria, multiple sclerosis, and may even be accompanied by jaundice. When, after several attacks no stone is found, no friction sound heard, and no swelling of the gall-bladder felt, cholelithiasis may, with tolerable certainty, be excluded, and neurohepatic colic may be assumed with great probability. *British Medical Journal.*

Opium in the Treatment of Diarrhœa of Infants.

Dr. Floyd M. Crandall (*Gaillard's Medical Journal*) says: In diarrhœa much opposition to opium has arisen during recent years, due chiefly to misapprehension as to its proper applications. While its improper use may do much harm. it is an agent of the greatest value and should not be abandoned. It is contra-indicated: 1, in the first stages of acute diarrhœa before the intestinal canal has been freed from decomposing matter; 2, when the passages are infrequent and of bad odor; 3, when there is a high temperature or cerebral symptoms are present; 4, when its use is followed by elevation of temperature or the passages become more offensive. It is indicated—1, when the passages are frequent, with pain; 2, when the passages are large and watery; 3, in dysenteric diarrhœa, together with castor oil or a saline; 4, in late stages, with small frequent nagging passages; 5, when the passages consist largely of undigested food, and the bowels act as soon as food is taken into the stomach.

The dose should be as small as possible, sufficient being given to relieve pain and check peristalsis. It should not be added to the ordinary diarrhœa mixture, to be repeated at short intervals. It should be given alone and at intervals sufficient to allow the effect of one dose to subside before another is given. This interval will rarely be less than four hours.

Chloroform During Sleep.

The following case is of interest as bearing on the question whether a sleeping person can be chloroformed without awakening.

The reporter was asked to take two teeth out for a girl aged seven, and as she is very timid and excitable, to give her chloroform. On going to her home he found her lying on her back in bed sound asleep. Having poured about two drachms, probably more, of chloroform on a folded towel, he gradually brought it to about two or three inches from her mouth and held it there. She went on breathing quite quietly, and neither coughing nor making any unwonted movements. In a very short time she was so well under its influence that her hand fell down when raised and the conjunctiva was insensible to touch.

She was then lifted out of bed, carried into another room and laid on a sofa without her giving any sign of consciousness. On opening her mouth, however, she put up her hands and turned her head on the pillow. More chloroform was given, and almost immediately she was in a state of complete anæsthesia and the teeth were extracted. She was easily aroused, but almost momentarily fell asleep again, and slept for two hours. When she awoke she was much astonished to find her teeth were out.—*Therapeutic Gazette.*

Growing Pains.

Growing pains, defined as pains in the limbs caused by and during rapid growth and sometimes so severe as to give rise to growing fever, have been diagnosed by the author less and less frequently as the years rolled by, until the vanishing point was reached. Cases which have been classed together under this name are the following:

Myalgia from Fatigue.—This is the commonest variety, usually about the knees and ankles after unusual exertion. They are probably due to autoinfection brought about by excessive production of *effete* materials in the blood and their inefficient elimination. Elevating the limbs and rubbing with the palm of the hand in a direction toward the heart, relieving venous stasis and facilitating a supply of healthy blood to the exhausted muscles, promptly relieves the pain.

Rheumatism.—This is second, if not first, in frequency. There is slight pain in the joints, little or no swelling, and very mild fever, and hence the true cause is not recognized; but rheumatic endocarditis frequently develops in these cases.

Diseases of Joints and Bones of the Lower Extremities.—Cases of hip joint disease and suppurative epiphysitis of the upper end of the fibula, diagnosed by the laity and allowed to go on untreated, are related under this heading.

Fevers, accompanied by pains in the limbs, in one instance proving to be inception of typhoid fever constitute this class.

Adenitis.—Here, again, the mother still supposes that the lad of sixteen years suffered from "growing pains," but he was treated for gonorrhœa and a sympathetic bubo.

The malady "growing pains," with its frequent concomitant growing fever, like its congener disorders of dentition, as a separate morbid entity exists principally as an article of faith. The complaint still maintains, however, a strong hold of the lay mind, and forms an extremely common lay diagnosis which is often the cause of much suffering, and even death, by leading to the neglect of curative measures at a time when they are most effective.—*P. B. Benne in Arch. Pediatrics.*

Chyle Cysts of the Mesentery.

Dr. W. H. Wenning reports a case of this disease in the *Lancet-Clinic* and says on the subject that the origin of these cysts is very uncertain. In some instances undoubtedly rupture of a lymphatic, in consequence of an accident or unusual exertion, may lead to the formation of a cyst. Here, in all probability, the fluid effused between the layers of the mesentery causes some irritation and the formation continues to separate the layers from each other. In other instances a rupture may lead to effusion of chyle into the free abdominal cavity. Single cysts might very easily arise in the first mentioned manner. When there are multiple cysts, however, the origin is more probably due to stenosis of the thoracic duct. Mendes de Leon thinks that, although a stricture of this nature might cause widening at the bottom of the duct, it does not sufficiently explain the formation of a cyst. Besides this, in cases of stenosis, collateral channels for the conveyance of chyle into the blood have been observed. Virchow, Rokitansky and Kilian have demonstrated the fact that the entire closure of the thoracic duct may give rise to considerable enlargement and crowding up of the chyle vessels. From the nature of the conditions found in my case I am inclined to believe that stenosis and obliteration of the thoracic duct was the cause of the formation of these numerous cysts Drs. Jones and Cleveland, who made an autopsy immediately after death, were unable to find the thoracic duct. There were no cysts, in the true sense of the word, if we look upon the sac as an adventitious structure, for the chyle seemed to be surrounded by the walls of the mesentery alone. When this membrane was pierced, or, as I have shown above, simply touched, it would collapse. There was, however, evidence of considerable inflammation of the serous membranes.

A Case of Diphtheritic Vulvitis in a Child.

The patient, a girl, aged one year, first came under my observation on September 11, 1894. The mother stated about five days previously the child had become irritable and restless, and showed other signs of pain, which were referred to the genital region; these symptoms were aggravated during micturition.

An examination of the vulva revealed several patches of false membrane covering anteriorly the internal portion of both labia majora and nymphæ, and invading the urethral orifice. The membrane was firmly attached and grayish white in color. The mother stated that two fatal cases of diphtheria had recently occurred in the house in which she resided, the last one about one week before her child was taken ill. There were no throat symptoms. A bacteriological examination made by Dr. William H. Park revealed the presence of the diphtheritic bacilli.

The patches disappeared under the use of local applications—chiefly peroxide of hydrogen and bichloride of mercury—and the child made a good recovery. At no time while the patient was under observation were any marked constitutional symptoms noted.—*Dr. Gnichtel in Journal of Cutaneous and Genito-Urinary Diseases.*

OBSTETRICS.

Labor and Heart Disease.

Tarnier (*Journal des Sages Femines*) notes that in heart disease all great and sudden efforts put the patient in peril, and labor is no exception to the rule. Running upstairs, racing to catch an omnibus or train, and sexual intercourse may all cause fatal syncope. The danger of labor is not special in this sense; it is dangerous in heart disease simply because it involves much effort. Tarnier induced premature labor in a lady who was subject to advanced heart disease. Notwithstanding all precautions, she became moribund in the course of the labor. Directly she died, he turned and delivered a live child, which survived. A woman was brought to Tarnier's wards in January, 1894, in labor with advanced heart disease and asystolism; she was apparently dying. Immediately about 300 grams of blood were withdrawn and the symptoms of suffocation diminished. The patient grew calmer. As it was extremely advisable to bring on labor quickly, as the forceps is apt to fatigue the patient, and as, in particular, the child was dead, the basiotribe was applied and delivery effected. A few days later the mother was doing very well.

Premature Delivery of Dead Child Induced by Acute Appendicitis.

The article by Dr. P.F.Munde (*N. Y. Med. Rec.*, Vol. XLVI.), with above title, has been followed by the reports of similar cases from other observers. Acute appendicitis may be

the cause of abortion and should always be considered when symptoms of appendicitis exist. The error should not be made of treating a case of abortion, in which high temperature and pain situated in right iliac region occur after expulsion of the fetus, as one of acute pelvic peritonitis. More recent reports show that the high temperature due to the appendicitis is not necessarily the cause of death of the fetus.

Operative interference for the relief of the co-existing appendictitis should be decided on as soon as the patient has recovered from the immediate shock of the abortion.

The Operative Treatment of Backward Displacements of the Uterus.

E. W. Cushing (*Gynecological Transactions*, Vol. XVIII.) draws the following conclusions from a study of the above subject:

Many cases of retroflexion and retroversion, if uncomplicated, cause little or no disturbance, and, therefore, require no operation.

Severe retroflexion in virgins, giving rise to symptoms sufficiently severe, is better relieved by operation.

Cases that resist simple measures, as the pessary, are usually found to have some com plication that necessitates operation. The only operations werthy of trial are the Alexander-Adams operation of shortening of the round ligaments by abdominal section and ventro-fixation. Alexander's operation is subject to the following limitations: freely movable uterus, exact diagnosis, favorable anatomical conditions. When these conditions are not present an abdominal section had better be done, and the case treated according to circumstances. If no complications are present, the uterus may be secured in anteposition by shortening the round ligaments internally, and by placing at each cornu uteri a suture passing through the abdominal wall. This operation is regarded by the author as equally safe, and on the average more reliable than the Alexander procedure.

The Diagnosis of Pregnancy in the Early Months.

Landau (*Deutsche Medicinische Wochenschrift*) believes that the exact estimation of the beginning of pregnancy is not possible as, apparently, the ovulation occurs independently of menstruation. The size of the uterus is in the early months also an unsafe guide. The form and consistence of the utertus is more reliable. It is enlarged evenly and in transverse diameter, so that the anteflexion is increased, the vaginal portion is drawn up, the vagina elongated, and the anterior vaginal wall appears tenser than otherwise. The consistence is softer, the sensation being as though the examining finger was pressed in soft butter, the finger passes in, finds no resistance, and returns no impression. Hegar's sign may be recognized in 80 per cent. of the cases; the same sensation as is perceived by palpating the lower uterine segment may be obtained by palpating the tubal angles. The consistence of the anterior and posterior uterine wall is irregular, usually the anterior is softer and looser than the posterior, which probably has some relation with the attachment of the placenta. In the examination attention should be paid to the fact that one cannot recognize all thrse signs at one tims, as the uterine contractions soon occur and interfere. It is necessary to examine frequently. The other usual signs of pregnancy should also be taken into account.

Landau's paper was founded upon over 200 cases of pregnancy, from the third to the twelfth week, and refers only to the normal position of the uterus.

Leucorrhœa in Young Unmarried Women.

In the treatment of leucorrhœa in young unmarried women, instances frequently occur in which the usual practice of making an examination to ascertain the condition of the pelvic viscera is so obnoxious to the patient, or is so firmly opposed, that the physician is forced to abandon it, and have recourse to medicine.

In such cases Dr. Slocum has learned to depend upon the scientific action which cantharides appears to exercise upon the cells constituting the genital as well as the urinary system. It is probably by direct stimulation of the cell just to the point of successful resistance that the benefit is secured, as the dose is very small. Strangury, or other unpleasant symptom, has not been produced. The action of the drug has been so uniformly satisfactory that when it fails, such result forms a strong basis for suspecting the presence of something more than simple hyperemia or mild inflammation. Lessening of the discharge is sometimes noted within five days, but in several cases of profuse discharge of four years' and longer duration, the treatment was not successful until after a month's persistent use.

The formula which has seemed the best, contains also the tincture of ferric chloride, and dilute phosphoric acid. These though probably modifying the action of the cantharides, are only adjuvants. Following is the usual form of administration:

Tincture of cantharides.....	96 minims.
Tincture of ferric chloride	160 minims.
Dilute phosphoric acid.....	160 minims.
Sprup of lemon.....	2 fluid ounces.
Water sufficient to make.....	4 fluid ounces.

M. Dose.—One teaspoonful, in water, after meals.

Albuminuria of Pregnancy as a Cause of Death of the Fœtus.

In twelve cases of the albuminuria of pregnancy recently observed by the author all the children were born in bad condition, only five of them surviving. In six the death was directly traceable to the toxæmia. In four cases multiple hemorrhages had occurred

into the placenta. These patients all came to him, however, in advanced stages of uræmic intoxication.

Speaking of the frequency with which these hemorrhages are observed in albuminuria, the author mentions an instance in which the weight of the clots equalled that of the placenta itself. He emphasizes the importance of early treatment, and especially the use of the milk diet in the interests of the child as well as the mother. In 250 cases recently studied by Bridier there was a fœtal mortality of 20 per cent., notwithstanding some treatment. The much larger mortality in Oui's cases, in which the milk diet had not been employed, is significant.

The induction of premature labor, the author thinks is indicated only after the milk treatment has failed to relieve the symptoms.

In the discussion, Chaleix laid stress on the importance of diuresis for the elimination of the toxines. In his hands the hypodermic injection of the physiological salt solution in large quantities had, in conjunction with the use of milk given through a stomach tube when the patient was unable to swallow, proved of marked service in desperate cases. The quantity of urine was increased, and both the maternal and the fœtal condition improved.

Dangers of Curettage.

During a recent discussion on this subject in the Obstetrical and Gynæcological Society of Berlin, six cases were reported which show how dangerous this operation may be in certain conditions of the uterus. The principal danger is that of perforation; but it is not equally great in all cases. In metritis the uterine tissues are resistant, and afford a solid floor upon which the curette may be carefully moved backward and forward with slight risk of perforation. The uterus is in a very different condition after abortion or labor. The tissues are profoundly modified, and the thickness of the walls greatly diminished. The dimensions of the cavity are irregular, and there is danger, even with the greatest precautions, of penetrating the peritoneal cavity. The cases reported by the German surgeons were principally of this kind, and in several of them the wound was so large that a loop of the intestines entered the cavity of the uterus. These cases are instructive, as they show that this operation should not be undertaken lightly, even by skillful men. They demonstrate what we have long known, and what cannot be too often repeated, that the uterus in involution is ruptured with the greatest facility; but these accidents should not deter us from performing curettage when it is necessary to prevent infection from retained placental debris.—*Union Medicale.*

The Etiology of Puerperal Fever.

The *University Medical Magazine* gives the following deductions from Dr. Herman's remarks in a discussion of puerperal fever:

1. Puerperal fever is produced by microorganisms which get into the system through wounds made in childbirth.
2. These organisms are transferred by contact. They are not inhaled or swallowed.
3. The transferrence of organisms is prevented by cleanliness, and the organisms are killed by antiseptics.
4. The hands are the usual poison-bearers; next in frequency clothes and instruments.
4. Investigation of a particular outbreak of puerperal fever should begin with inquiry into the precautions taken by doctors, nurses, and mid wives to secure the cleanliness and disinfection of their hands, clothes and instruments.
6. There is no such thing as self-infection with puerperal fever. The causes supposed to produce "autogenic" puerperal fever produce, in lying-in women defended antiseptics from septic poison, only trivial illnesses.
6. The inhalation of sewer gas causes in the puerperal woman the same symptoms as in other persons. There is no good evidence that, in women defended by antiseptics from septic poisoning, it produces symptoms like those of septicæmia.
8. The poison of erysipelas of the skin produces in lying-in women erysipelas of the skin, and no other illness. But the poison of the disease known as phlegmonous erysipelas of cellular tissue produces puerperal fever.
9. The poison of scarlet fever produces in lying-in women scarlet fever, and no other illness.

Extra-Uterine Pregnancy at Tenth Month: Placenta Inserted on Intestine.

Houzel describes (*Ann. de Gynec. et d'Obstet.*) a case in which the period was last seen on May 1, 1892. A violent attack of hypogastric pain, with dysuria, set in early in November. On February 10th, spurious labor set in and lasted four days; a decidua appears to have been passed. On March 15th, she remained undelivered and still felt pain; there was fever, but no diarrhœa. The sound passed three inches into the empty uterus. The outline of the child could be very distinctly seen through the parietes. On March 18, 1893, abdominal section was performed. The peritoneum was of a singular green tint. The fœtus, slightly macerated, lay immediately underneath; its head was deeply engaged in the left iliac fossa, and much deformed from pressure. It had developed in the left tube, and the sac had evidently ruptured during the previous November. The placenta had become attached to the small intestines, and was still free from an retrograde change. The fœtus was removed, and the cavity which it had occupied was filled with iodoform gauze. On March 28th the placenta began to separate. There was some constitutional disturbance. On April 5th the last piece came away, and convalescence was thenceforth rapid. The drainage tube was removed at the end of April; the orifice of its track closed in a few days.

Pregnancy at the age of Fifty-nine.

In the *Gazette de Gynecologie*, Dr. Depasse reports the case of an aged-looking lady with white hair, supposed to be suffering from a large uterine fibroid, whom careful examination proved to be pregnant. She was confined of a boy at the full term, and was able to nurse him; she wearned her son on her sixtieth birthday. She was a widow and had a married daughter aged forty. The age was verified by a certificate of birth. Such late pregnancies are extremely rare.

Symphysiotomy.

Professor Leopold gives (*Annales de Gynec. et d'Obstet.*) the following conclusions as regards symphysiotomy.

1. Symphysiotomy, as formulated by Morisani, is a great clinical victory. But the operation should not be vulgarised. For the dangers it bears with it are very real, and in consequence it cannot replace perforation or even version with the general practitioner.
2. Primiparæ should not be subjected to symphysiotomy.
3. As regards the future state of women operated upon, there is as yet not time to pronounce definitely.
4. Hemorrhage and vaginal lacerations command great prudence, and affect the after-treatment.
5. As a rule symphysiotomy is applicable to pelves of from 7.5 to 6.5, or perhaps 6 centimeters in the conjugata vera. These cases should be sent to the clinics. A general practitioner under the same conditions should think of the mother and perform perforation.
6. In contracted pelves of 7 centimeters, if the medical man is consulted in time, premature labor should be induced. If too late for this then let the labor proceed naturally, deep the membranes intact until the external os is fully dilated. If the labor does not end naturally it is still possible to deliver children of good size at term with success, by version and immediate extraction if the following conditions are present: Membranes intact, complete dilatation, and the use of Walcher's position. (The patient has her legs hanging over the side of the table).
7. Exceptionally with these latter conditions all present and favorable, if version and forceps at the brim do not give any hope of effecting delivery, symphysiotomy may be used with these diameters.

Gestation Complicated by Appendical Abscess.

McArthur (*American Journal of Obstetrics*) reports two cases of pregnancy complicated by abscess of the vermiform appendix. One case was advanced to four and a half and the other case to five months. Both cases were operated upon and the abscess cavity drained before general peritonitis had occurred.

Abortion resulted in the first case the morning following operation, and in the other case not for two days later. The lessons of the cases detailed may be set forth in the following propositions:

1. That the largest proportion of all cases of acute suppurative appendicitis are seen by the surgeon only forty-eight hours or more after their onset.
2. That in the great majority of such cases an abscess exists outside of the appendix and whose walls are made up of the structures which surround the appendix at the onset of inflammation, and which are held together by plastic lymph.
3. That profound sepsis, either chemical or bacteriological, will sooner or later induce fetal death and miscarriage.
4. That after the third month of gestation a portion of the wall of the appendical abscess is usually formed by part of the right wall of the uterus.

From the fact that after opening the abscess and draining its cavity there is a shrinking of its wall and a disturbance of the relationship of parts which existed prior to operation, with the risk of infection from such cause, and as it seems most likely, for reasons mentioned, that the fetus cannot be saved, it seems good practice to lend every effort to save the mother, and to, therefore, before closing the abdominal wound, empty the uterus and establish those relations of the structures which we desire to maintain after closure of the abdomen.

ARMY AND NAVY.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE FIFTEEN DAYS ENDING APRIL 27, 1895.

Lieutenant Colonel Dallas Bache, Deputy Surgeon General, to be Assistant Surgeon-General, with the rank of Colonel, April 18, 1895.

Major David L. Huntington, Surgeon, to be Deputy Surgeon-General with the rank of Lieutenant Colonel, April 18, 1895.

Captain William C. Shannon, Assistant Surgeon, to be Surgeon with the rank of Major, April 18, 1895.

NEWS AND MISCELLANY.

American Medical Society Meetings.

Owing to the meetings of the American Medical Association and the Medical Society of the State of Pennsylvania which fall this year upon May 8th and May 22nd, regular meeting days of the Philadelphia County Medical Society, the latter society has substituted for these two meetings one meeting on May 15th, for which an extremely interesting programme has been arranged.

The State Board of Medical Examiners.

The State Board of Medical Examiners, representing the Medical Society of the State of Pennsylvania, will meet in Philadelphia, corner of Broad and Pine Streets, and in Pittsburg, Council Chambers, on Tuesday, June 18, 1895, at 2 P.M., to examine applicants

for license to practice medicine in Pennsylvania.

Blank applications and all necessary information can be obtained from the Secretary of Internal Affairs, Harrisburg, Pa.

H. G. McCORMICK,
President of Board.

Third International Congress of Dermatology, to be held in London, August 4th to 8th, inclusive, 1896.

President—Jonathan Hutchinson.

Vice-Presidents for the United States—Dr. Duhring, of Philadelphia; Dr. White, of Boston; Dr. Nevins Hyde, of Chicago; Dr. Bulkley, Dr. Keyes and Dr. Fox, of New York. For Canada—Dr. F. Shepherd, of Montreal; Dr. Graham, of Toronto.

Treasurer—Malcolm Morris.

Executive Council—Chairman, Mr. Hutchinson.

Committees—Reception—Chairman, Dr. Radcliffe Crocker.

Museum and Demonstration—Chairman, Dr. Stephen Mackenzie.

Bacteriological—Chairman, Dr. Sims Woodhead.

Secretary to Section for Syphilis—Ernest Lane.

DR. J. J. PRINGLE, Secretary-General.
23 Lower Seymour Street, London, W.

REGULATIONS.

1. All duly qualified medical men, British or foreign, or others interested in science invited by the Council, who shall have paid the fee of £1 sterling (the equivalent of £1 sterling is: French, 25 francs; German, 20 marks; Italian, 25 lire; American 5 dollars), and who shall have enrolled themselves, shall be members of the Congress and entitled to the Volume of Transactions.

2. The official language of the Congress shall be English, French and German, but with the permission of the president, members may express themselves in the language with which they are most familiar.

3. The proceedings of the Congress shall be embodied in a Volume of Transactions, edited by the Executive Council.

4. Communications relative to membership, papers, or other matters connected with the Congress, should be addressed to the Secretary General, Dr. J. J. Pringle, 23 Lower Seymour Street, London W., or to one of the foreign secretaries.

5. The fee for membership shall be payable in London, at or before the opening of the Congress.

It will greatly facilitate the work of executive if the fee is forwarded as soon as possible after the 1st of May, 1896.

6. Members who are unable to attend Congress shall receive the Volume of Transactions.

7. The subjects treated of shall be of two orders—

(1). Those selected beforehand by the Executive Congress and introduced by gentlemen chosen for that purpose by the Council.

(2). Those selected by individual members themselves.

8. Subjects selected for debate by the Council shall take precedence over those selected by the members.

9. The sittings of the Congress shall take place from eleven to one in the forenoon, and from three to five in the afternoon of each day.

10. There shall be clinical demonstrations of patients every morning from nine to half-past ten and every afternoon from two to three.

11. Members contributing papers must submit an abstract of them to the Secretary-General on or before the first of May, 1896, which will be printed either in full or in part, embodied in the general programme of the Congress which will be distributed at its opening.

12. At every debate precedence will be given to gentlemen who have communicated beforehand their intention to take part in it.

13. No papers lasting more than twenty minutes will be permitted. Speeches will be strictly limited to ten minutes each. MSS. of the papers read must be left with the Secretary-General before the end of the sitting. The Executive Council shall decide as to the entire or partial publication of such papers in the Transactions of the Congress.

J. J. PRINGLE, Secretary-General.
GEO. THOS. JACKSON, New York,
Secretary for the United States.

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ORIGINAL ARTICLES.

INTRA-CAPSULAR FRACTURE OF THE HIP-JOINT.*

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The fracture is usually at the small part of the neck, though occasionally in the very young there may be a separation of the head. The line is more often transverse but may be in any direction, transverse, oblique, irregular, and in one instance reported, spinal. There may be interlocking of fragments, though this is very rare; when it does occur it is the lower frament into the upper one. Generally a large, smooth, convex surface presents on one fragment and a depression on the other. The head may be comminuted by the lower fragment.

The usual displacement is of the shaft upwards, backwards and outwards, with or without laceration of the capsular ligament; however, this is varied, in the proportion of one in every five cases, to an upward direction of the lower fragment. This displacement is a gradually increasing one, from one-half to one inch at first, increasing during the first two weeks to one-and-a-half to two inches, In impaction there may be a twisting of the one or other fragments. A complete over-lapping of fragments may occur.

The position of the limb is almost pathognomonic of this fracture; the foot widely everted with shortening and a total inability (usually) to bear the slightest weight upon it, so that if the patient is in the upright position the body is supported on this side by the hands and not the leg. A further investigation will show an inability to lift the foot forward, as in the act of walking, or to raise the heel from the bed when lying down. In the impacted variety this may be modified to the extent of allowing the patient to stand upon the feet for a while, or to walk some distance before the leg gives way. There is pain, varying in character, but especially severe upon the slightest movement or pressure at the point of injury. There is a flattened condition of the hip on the injured side. Crepitus can generally be obtained by rotation inwards with slight extension to bring the fractured ends into apposition. This is not a constant symptom, and the search for it should always be carefully made lest an irreparable injury be inflicted by unlocking a possible impaction. The trochanter rotates in a shorter radius, acting from the point of fracture rather than the head of the bone. It is above Nelaton's line in the triangular space described by Dr. Bryant, and nearer a line drawn in the axis of the body on the injured side. (Morris' measurement.)

Histologically, the neck of the femur is constructed of cancellous tissue surrounded by compact tissue, the latter varying in thickness at different parts of the neck as well as on its anterior and

*Read before the Tennessee State Medical Society, April, 1895.

posterior aspects. On the anterior aspect, the compact tissue is thinnest where it joins the head, and becomes thicker posteriorly until it joins with the intertrochanteric line, which itself is compact tissue. On the posterior aspect of the neck the compact tissue is thickest where it joins the head, and becomes gradually thinner as it proceeds backwards and outwards, losing itself in the cancellous structure underneath the great trochanter, which is really an apophesis for the attachment of the external muscles and adds little to the strength and resistance of the bone at this point. This makes the two weakest places in the bone just posterior to the head in the small part of the neck, where the anterior layer of compact tissue is thinnest, and at the base of the neck just above the trochanter, where the posterior layer grows thinnest before losing itself in the cancellous tissue underneath the great trochanter. These are the points at which fractures usually occur, hence we are forced to recognize these histological differences as predisposing causes to fractures at the upper end of the femur.

Beyond the age of fifty, the bone undergoes radical change in its structure, particularly at this point. The canals grow larger, the compact tissue thinner, the spongy tissue being filled with fat. The size is not altered, but the specific gravity becomes less and the resisting power of the bone to strain or force greatly diminished. This is not an absorption of animal tissue alone, but a senile atrophy; the changes which effect this condition being, chiefly, the enlargement of the canals and the thinning of the compact tissue, which latter becomes so thin at times as to be faintly translucent. Hence we find that the great majority of these fractures occur beyond fifty. To this cause is attributed its greater frequency in women, as the changes referred to occur earlier and proceed to a greater extent in women than in men.

Disease also, such as rhumatoid arthritis, contributes to or causes this fracture, though more often the head of the bone is absorbed in this disease in the hip-joint.

Another change which occurs with age in both sexes, is an increasing acuteness in the angle between the neck and the shaft of the bone, the neck being found at times almost at a right angle to the shaft in the very old. The bone would undoubtedly stand a less degree of strain or violence with the neck at an acute angle with the shaft than at an oblique angle, but the fact of such change has been disputed by Bodet after investigations which led him to assert that the changes in the angle as a result of age were of so few degrees that as a causation it would have little effect. It is possible, however, that the difference in the angle between the sexes may explain, in part, the greater frequency of this fracture among women.

The anterior-posterior diameter in the neck is smaller than in the shaft of the bone, and smaller within the capsule than at the base of the neck.

The great prominence of the trochanter major, with direct violence, transfers directly to the weakest portion of the bone, force which would otherwise be modified or dissipated by the thick, elastic cushion of muscles which cover the joint.

The depth of the acetabulum makes it act as a fulcrum for the head of the femur, increasing the strain upon the neck in force transmitted from below, in direct blows upon the trochanter and in strain from sudden, violent, muscular action, transforming force which would otherwise result in a strain or dislocation into fracture.

The exciting cause of fracture of the neck of the femur varies from the slightest degree of muscular strain transmitted through the limb from below, or in leverage, the limb being caught in adduction or abduction, to the greatest amount of direct force received directly upon the trochanter major. Stumbles, missteps, the jar received in stepping from the curbstone to the street, catching the foot in the carpet in turning or walking, loss of balance, twists of the body in emptying a pail of water, turning over in bed, bending to one side to keep from falling, falls on the knees, side of the thigh or on the buttock, muscular action in the movements of the thigh in adduction, abduction or rotation—all have been held responsible for a degree of violence sufficient to produce the intra-capsular fracture. Malgaine asserted that exaggerated muscular action plays an important causative part at all times in the production of these fractures; in some cases the fall being secondary and in consequence of fracture produced by muscular action. The intra-capsular fracture more often occurs from the action

of indirect force and lighter degrees of violence, and in the aged and infirm; without the capsule fractures occur more often in the young and healthy, and the exciting cause is more generally great and direct violence received directly on the trochanter, possibly transmitted from below.

The general question of repair of this fracture by bony union, has been a subject of difference between surgeons; the difficulty of its satisfactory solution being a divergence of opinion in the interpretation of the processes which have taken place in the specimens of this fracture in existence. Owing to absorptive changes in the head and neck at the seat of fracture, it is said to be impossible to determine beyond cavil: 1st, whether the bone has been broken, or whether the changes are not simply the result of absorption; 2d, whether, conceding a break, they were intra-capsular fractures purely; or, 3d, is the union by fibrous or bony tissue?

There can be little doubt that in early life, up to the age of seventeen years, there have been cases of repair by bony union, but these cases are supposed by some to have been separation of the epiphyseal head with impaction, not fractures at the small part of the neck, or those rare cases with little or no periosteum torn and consequently very little if any displacement of fragments. The great majority of surgeons of the present day, claim that union takes place but very rarely, if at all; though close fibrous union does occur at times. The head of the bone, however, maintains life through a branch of the internal circumflex artery in the untorn portion of the periosteal covering, it being a fact that the periosteum is seldom torn completely around, the anterior-inferior portion escaping, and is capable of and does produce callous.

In view of these facts, even barring those rarer cases of impaction (which would undoubtedly have a better chance for union of this nature even though the periosteum was torn completely around, for the cancellous structure has reproductive power of its own), it does seem that with close and proper approximation and with absolute immobilization it might be possible to get some kind of bony union here. The real difficulty, unquestionably, is not the inability of the fragments to unite through defective vitality, but the heretofore impossibity of complete immobilization, and the chance of approximation we were forced to accept as the best which could be done. The changes in the neck of the bone which predispose to fracture, certainly do not of themselves decide this question in the negative, though, in any special case, either incomplete approximation, deficient immobilization, or the completeness of the periosteal tear might do so.

The attainment of close fibrous union of this fracture, giving a fair degree of usefulness to the limb, is an undoubted possibility. My own conclusions are that could approximation and immobilization be maintained, there is nothing to prevent union by bone at this point, since, 1st, the upper fragment is alive and capable of granulation; 2nd, approximation, heretofore, with most of the methods devised (extension and rotation inward or outward, as the case may require for eversion or inversion of the foot) has been almost chance work, owing to our want of control of the upper fragment and its general displacement inwards by the pressure of the lower fragment, and our neglect of local control of the upper end of the lower fragment. These methods correct the upward and backward displacements, but they leave an outward displacement due to the continued action of the hip muscles in this direction, still unconquered. Approximation being still incomplete immobilization could do no good whatever; 3rd, the rarer cases of reported union have been, must have been (with a chance approximation possible only), either cases where the periosteal covering was untorn or torn but slightly; cases of impaction, or cases of fracture partly within and partly without the capsular ligament.

Whatever the possibility in these cases, the result, in the past, has been an almost universally bad one—disability more or less, the patient suffering all degrees of functional interference from a permanent confinement in bed, to the use of a crutch or cane—with close fibrous union and little deformity but always with an amount of shortening from one-half to two inches. The limb may even retain considerable usefulness when union has failed entirely, owing to the support which the Y ligament and the quadrator femoris gives to the body.

The differentiation between intra and

extra-capsular fracture depends much upon the history of the case, the symptoms differing more in degree than in character, and it is asserted that an actual diagnosis between the two is a matter of little moment since the treatment is practically the same in both varieties. Such reasoning should be condemned, as the hypothesis upon which it is based is untrue. The treatment for both these varieties of fracture need not necessarily be the same, or rather the treatment which accomplishes a good result in the extra-capsular fracture has hitherto been an almost total failure in the intra-capsular, and there are points of differentiation of value for self-satisfaction and prognosis. Without being exhaustive, a few of these symptoms will be enumerated that the contrast may be established for the purpose of precaution both in prognosis and treatment, as will be shown hereafter to be necessary.

The intra-capsular fracture is nearly always seen in the very old (fifty and upwards), while the extra-capsular fracture is more often seen before this period. The fracture within the joint is most common in women, while the fracture without the joint is equally common to both sexes. The degree of violence in the intra-capsular variety is usually very slight, which is seldom the case in the extra-capsular variety. The internal variety is produced from below (generally) by force transmitted through the limb, the external by force directly upon the trochanter. In the intra-capsular variety the shortening is small at first, gradually increasing with the progress of time; in the extra-capsular the shortening is immediate and complete. In the one case we have pain, redness and swelling referred to the hip joint, in the other to the trochanter.

The only dislocation with which intra-capsular fracture would be likely to be confused, is the pubic. This would give shortening and eversion, but the shortening would be greater and the eversion less in the dislocation. In intra-capsular fracture the displacement, if it exists, would be a drawing upwards, backwards and outwards of the lower fragment, while in dislocation the head of the bone would be felt in the groin. In fracture we would have extra mobility with probable crepitus; in dislocation, diminished mobility and absence of crepitus. The pain existing in fracture would be ascribed to the joint, in dislocation to the groin.

In those exceptional cases where the foot is inverted in this fracture, the appearance of the hip alone (flattening) would indicate the impossibility of dislocation in the upward and backward direction. In any degeneration, as that of tuberculosis or rheumatoid arthritis, the history of previously existing disease of this character should lead to a proper conclusion.

The consideration of treatment involves the question of the possibility of union by bone at this point of fracture in the femur. An avowal of hopelessness of this point means helplessness, and it would become our duty, after a short interval for the subsidence of acute inflammatory symptoms, to abandon all restraint or confinement instead of making a pretense of that which, under this supposition, can never be accomplished.

But is such a supposition correct? Many surgeons reasoning from the almost universal result, non-union, have jumped to the conclusion that there could be none; and have attributed the failures to a want of vitality in the upper fragment of the fractured bone. This may be, and doubtless is the cause of non-union in some few case where the violence has been very great, producing comminution of the upper fragment or tearing the periosteum completely apart around the whole circumference of the bone; but, that it is not universally the case is proven by the few cases of union of bone which have taken place in early life, by the preservation of vitality in the upper fragment in all cases not comminuted, with even partially preserved periosteum, or uncomplicated with general conditions of disease tending to retard or defeat bone repair. It is further proved by the cases of cartilaginous union, as this is but the uncompleted process of union by bone. That the changes occurring as the result of age simply, is not a hindrance to union is proven by the fact that union by fibrous tissue is not limited to the cases which occur in early life, but in old age as well.

It is a well known fact that a fracture seldom occurs here, so severe or extensive that there is not some portion of the periosteum remaining untorn. This untorn portion is usually on the under and anterior aspect, and in it is rescued, for the

nutrition of the upper fragment, one of the branches of the internal circumflex artery. This branch and the blood through the ligamentum teres is sufficient to give a healthy vitality to the detached head of the bone, and if it is ample to do this, it is equally plain that there should, under other proper conditions, be a production of callous.

Some of the specimens of fibrous union in existence, show a want of perfect approximation and a bridging over of an intervening space by fibrous union in spite of imperfect approximation, the fibers taking an oblique course rather than a straight direction with the axis of the neck portion of the lower fragment. This seems to prove that with perfect approximation and retention there would have been unquestionably bony union where fibrous union was accomplished in these cases, as the failure to preserve these two requisites (approximation and retention) is the main cause in the production of fibrous, rather than bony, union elsewhere.

The acknowledgment of the possibility of callous production between the fragments of this fracture, leads to the confession of an attainable bony union, and we ask ourselves, what are the conditions required? To answer this question we must again inquire as to the displacement. In by far the greater number, the displacement is upwards and backwards (shortening), with external rotation (oversion); in rare cases upward and forward displacement and internal rotation; in either case the upper fragment is pushed to one side by the lateral pressure of the displaced lower fragment. In this condition, it is pertinent to ask, does extension and inward rotation (the correction of eversion and shortening), or extention and outward rotation in those rarer forms of displacement, correct the deformity entirely? Unquestionably they do overcome shortening and correct eversion by opposing gravity of the limb and counteracting the effect of the rotator muscles in twisting the limb; but they do not overcome the outer displacement, as made by such muscles as the gluteus medius on the upper end of the lower fragment, or bring into apposition with the already partially displaced upper fragment, except it be by the merest chance; this chance being sufficient to account, together with impaction, for the very few cases of partial approximation as evinced by ligamentous union. Evidently then there is something more required in the treatment of this fracture than extention and rotation in the reduction, and extention, rotation and counter-extention for its retention, which form the only principles maintained in nearly all the ordinary splints in common use for its correction. There needs must be, in addition to these principles, local internal pressure over the upper end of the lower fragment to overcome the remaining force in outward exertion and to bring it into relation with the upper fragment at all, besides continued pressure in line with the axis of the neck to keep it there. The bulging trochanter seems the most convenient place to place such pressure, and it is possible to imagine this attained by any of the splints of the straight variety to which has been previously adjusted a pad for the trochanter, or with the suspension variety with pad or even sandbag pressure. It is even possible that the sandbags ordinarily used with the latter variety to keep the body straight, has by pressure, unconsciously to the surgeon, contributed towards a nearer approximation and consequently ligamentous union in a few cases. That surgeons of the past recognized something unattained, is evidenced by the number of retention splints which have been devised; and that they were correct is proven by the almost total failure to obtain union by any of them. It remained for Dr. Nicholas Senn to correct this cause of non-union, and also to perfect the plaster splint so as to leave little to be desired in meeting the indications present. If we may hope for intracapsular union at all, we must look for it through this apparatus, or one fulfilling these indications equally as well.

I quote a description of this device from De Costa. "To secure perfect immobility at the seat of fracture, it is not only necessary to include in the dressing the fractured limb and entire pelvis, but it is absolutely necessary to include the opposite limb as far as the knee and to extend the dressing as far as the cartilage of the eighth rib. The splint is incorporated in the plaster dressing and it must be carefully applied, so that the compress, composed of a well cushioned pad with a stiff unyielding back, rests directly upon the trochanter major, and the pressure, which is made with a set-

screw, is directed in the axis of the femoral neck. Lateral pressure is not applied until the plaster is completely set. Syncope should be guarded by the administration of stimulants. As soon as the plaster has sufficiently hardened to retain the limb in proper position, the patient should be laid upon a smooth, even mattress, without pillows under the head, and in non-impacted fractures the foot is held in a straight position and extention is kept up until lateral pressure can be applied. No matter how snugly a plaster of Paris dressing is applied, as the result of shrinkage it becomes loose, and without some means of making lateral pressure it would become necessary to change it from time to time in order to render it efficient. But by incorporating a splint in the plaster dressing, this is obviated and the lateral pressure is regulated day by day, by moving the screw, the proximal end of which rests on an oval depression in the center of the pad."

Concerning the final results in these cases but little more need be said. The results for good union in the past, as has been said, are practically negative. As to full restoration, it has been asserted that there never has been a proven case of full restoration with complete bony union, full length, natural position and strength. While this is true and a large number of these cases remain permament fixtures in bed, there is yet a large proportion who regain, under even the unfavorable conditions, a large amount of functional activity. Either the broken ends of the bones became smoothed by rubbing against each other, or the lower fragment makes for itself a new socket of fibrous tissue and the outer fasciculus of the Y ligament and the tendon of the obturator support the weight of the body upon the shaft below. The permanent condition varies from that of bedridden helplessness to crutches or cane, but always with perceptible shortening and consequent lameness. I must enter my vigorous protest against the do-nothing policy so frequently followed in the very old, where accepting death or non-union as inevitable, the patient is made as comfortable as seems possible under such a policy, in any position as to the limb, under the hopeless thought that it is all useless anyway. Such policy is worse than it seems without thought, for it contributes directly to the production of hypostatic pneumonia and fatty embolism; subjects the patient to the tortures of continued confinement in bed and ends in concomitant results at this age—uncleanliness, bedsores and exhaustion, when all might be releived by a proper application of the Senn device, at least until time had eradicated the immediate results of such an injury (active inflammatory action), and transferred him to that safer and less helpless state of non-union which has been the finale in these cases, thus giving to him at the same time whatever chance remained for him for the production of bony or fibrous union. With this splint the patient can be handled with impunity.

The manner of death in this fracture, when it occurs, is from hypostatic pneumonia, fatty embolism or exhaustion; neither needs elucidation here.

In conclusion, let me say this paper is not intended as an eulogy on a man, but is written to emphasize a method, which if rightly understood and appreciated will bring about marked change in the final results in this fracture.

ACUTE CROUPOUS PNEUMONIA.*

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I have selected this common, every-day and probably somewhat "shelf-worn" disease as the subject of my essay, for two reasons: First, It is a common disease of universal prevalence, with which every practitioner has had more or less to do practically; with which every one is more or less familiar, and has usually well defined ideas as to its nature and treatment. It is, therefore, a subject which should elicit a general discussion and develop individual experiences and observations,

*Read before the Tennessee State Medical Socity, April, 1895.

which is always more valuable in societies than recitations from books and standard authorities. Second, I have selected it because I do not believe that the profession is agreed as to many vital points connected with it; I have seldom heard the subject discussed, in a medical association, or even in a professional consultation, that there were not as many different, and often conflicting, opinions as to its nature and treatment, as there were speakers; each believing that he alone was correct. If my humble effort shall arouse a thorough discussion of this important disease by this learned body (an is my hope) I shall be very much disappointed if the same honest differences of opinion do not exist here as elsewhere.

As there can be but one true theory upon these points, this great diversity argues that many must necessarily be in the wrong; and that there exists a necessity for more information upon the subjects; which can be only arrived at by free comparison of individual views and observations. These are my apologies for presenting a subject which in these times of new ideas and fads, may be looked upon as somewhat trite and obsolete.

I will further explain that in treating this subject in the manner essential to the requirements of the twenty minute rule, I shall not attempt system or elaborateness, but shall devote my remarks to points connected with its nature and treatment, about which there may exist diversities of opinion and differences in practice; and leave out of consideration such points and theories as are very generally conceded by the profession. I shall not allude to the other varieties of pneumonia; and shall, in this variety, omit everything which is not explanatory of its nature or suggestive of its treatment.

Croupous Pneumonia is so-called on account of the inflammatory process which attends it, being of the peculiar nature known as croupous inflammation, which is characterized by an exudate upon the surface of the mucous membrane involved, of a fibro-plastic material poured out under the stimulation of the inflammatory action.

This exudate instead of forming a coating or pseudo-membrane as it does upon free and more open surfaces under similar conditions, here accumulates in the lung alveoli and inter-vesicular terminals of the bronchiæ, filling up, rendering them solid, and obliterating for the time the porous and spongy lung parenchyma, and constituting the characteristic feature of the disease, *heputization* or *solidification*. This condition, being always found embracing a lobe of a lung, or a large area of tissues in continuity in one or both lungs, has given to the disease another of its synonyms, *lobar pneumonia*; which stands in contradistinction to lobular, catarrhal, insular of broncho pneumonia.

The extent of lung involvement, indeed the existence of the disease almost in toto, depends upon predisposing influences, such as have lowered dynamic forces or impaired vital resistance. Hence the disease occurs almost wholly in persons laboring at the time of its invasion, under the enervating or vitiating influence of some other form of diseases, such as measles, whooping-cough, typhoid fever la grippe, etc.; or in those whose health and vital resistance have been impaired by previous attacks of this or some other disease; also are those predisposed whose vital resistance has been impaired by exposure, irregular habits and general debilitating causes; and above all are those predisposed who have lingering in their systems certain vices, such as malarial toxæmia, and that engendered by habitual abuse (or rather use) of alcoholic liquors. In a long term of practice in a malarious region, I have observed that a great proportion or the pneumonia subjects of winter and spring were of the old malarial subjects of the previous summer and fall.

It is a disease of very general prevalence and is not confined to any particular climate or locality. It occurs most frequently in winter and spring. Males are more frequently affected than are females; and the right lung more frequently than the left. It was at one time believed that young children were almost exempt, latter day observations prove the reverse.

While the formerly entertained opinion, that cold, sudden changes in temperature and exposure are the efficient exciting causes of this disease is still adhered to by many, and probably to some extent conceded by all, still the dominant opinion of the day is that the disease has for its exciting cause a micro-organism of peculiar morphological characteristics, called by Fraenkel, *Diplococcus Pneumoniæ*.

Probably there can be no question but that this organism is always found in great numbers in the morbid tissues of the disease under consideration, and that the pure cultures produced somewhat similar conditions in experiments upon animals. The same micro-organism, is found in the normal secretions of the salivary glands and buccal cavity. It remains to be more fully demonstrated whether it is a mere concomitant of the disease, stimulated into pathological activity and perverted characteristics by the peculiar disease influence, or whether it is really an etiological factor in the disease.

The *Micrococcus Pasteuri,* differing in many essentials from the former, has been largely experimented with of late years by Dr. Sternberg, and is believed by him and many others to be the real pneumonic germ. The frequent occurrence of the disease in an epidermic form has been seized upon as evidence of its microbic origin. This to my mind, is far from conclusive. The predisposing influences are most usually endemic in character, rendering all persons living in a certain locality more or less receptive and liable to fall victims in an outbreak in which the exciting cause might be catarrhal, atmospheric or telluric, and giving to the outbreak as pronounced epidemic characteristics as though it was of microbic origin. The limits of my paper will not permit me to discuss further the microbic origin of the disease. The omni-presence of the organisms in the diseased tissues, and their power to reproduce the disease, if true, seem conclusive of their causative nature.

The anatomical changes of this disease are to be studied from three separate and distinct standpoints or stages, which are usually denominated, the first, second and third stages; or to speak more in pathological terms, the stage of hyperæmia or engorgement, the stage of solidification or hepatization, and the stage of resolution; each embracing pathological phenomena peculiar to itself, and giving rise to signs and symptoms of individual and peculiar significance, calling for study in detail.

The first stage marks the gradual progress from the normal to the abnormal; from the physiological to the pathological. It is one of hyperæmia extending over a large but usually well-defined area of lung, brought about by some disease-producing agent and exerted, evidently, through nervous influence. This local manifestation is evidently the expression of a systemic cause. The initial chill in adults, convulsions in children, succeeded in both by pyrexia in advance of all appreciable local disturbance, marks the disease as a true lung fever, no matter what may be the primary agent which exerts its depressing influence upon the nerve centers.

During the first stage, the blood vessels distributed around the lung alveoli, after a period of simple hyperæmia, become engorged and congested to the stage of blood stasis. In the early changes peculiar to this stage, the mucous membrane of the alveoli and contiguous bronchical terminals becomes dry, thickened and inelastic, giving rise to the hoarse, irritable, dry cough of this period. Later on, as the engorgement progresses, there occurs a slight serous effusion with the commencement of plastic formation, which proceeds to constitute the subsequent leading characteristic feature of this disease. This plastic material being distributed over the alveolar walls, renders them tenacious and causes their opposing sides to adhere when brought together by the mechanical pressure of the surrounding engorged tissue in the act of expiration, to be torn apart again by the filling of the alveoli in each inspiratory movement, giving rise to the auscultatory physical sign of the first stage, *crepitant râles.*

Extreme engorgement at this stage produces two other characteristic phenomena; the extravisation of red corpuscles by diapedesis through the capillary walls into the air vesicles, which, mixing with scant secretions in small bronchiæ, gives the characteristic symptom, *rusty sputum;* while the more solid character imparted to the normally porous and spongy lung tissue by the great vascular engorgement, renders it a better conductor or sound, transmitting the to and fro movement of the air through the bronchiæ, and producing, probably the first significant physical sign, *bronchial respiration.*

All of these conditions belong to the first stage, and progressively tend in one direction, resulting, unless resolved by nature or arrested by treatment, in more or less perfect and impermiable solidification of that portion of lung involved in the area of disease influence or patholog-

ical storm center; thus giving rise to dullness or flatness on percussion, with negative auscultatory signs.

This condition of solidification results from the progressive exudation of fibroplastic elements into the lung alveoli and inter-vesicular bronchiæ, until they become completely filled or clogged up by the coagulation of this material, constituting *red hepatization*, or the second stage of the disease, which is usually reached from the third to the fourth day after the initial chill.

About the completion of the condition of red hepatization, or often preceding it, occurs another vascular condition, the appreciation of which is important in the treatment at this stage. I allude to an intercurrent complication known as collateral œdema, which grows out of extreme engorgement and interference with the circulation in and around the disease focus, and consists in a serous effusion into the connective tissue in the immediate neighborhood of the disease, effectually and suddenly cutting off from respiratory function a much larger lung area than is involved in the actual disease and producing sudden death from apnœa.

This complication of pneumonia occurs in the better class of subjects, those possessing good plasticity of blood and strong dynamic force. These cases when detected require a line of treatment peculiar to themselves. The condition of red hepatization is termed the second stage of croupous pneumonia. I am inclined to look upon it, however, as the climax or perfection of the first stage, but shall not contend for so radical a change in the usually accepted classification of stages.

The condition of red hepatization is usually one of short duration; the processes of resolution often commencing while portions of lung in the immediate neighborhood are yet in the stage of engorgement, presenting to the diagnostician signs conflicting and significant of different conditions apparently from the same locality; this same perplexing complication occurs again when the disease spreads or invades peripherally as it sometimes does.

As a very general rule, the disease does not remain longer than a few hours at the point of red hepatization before the retrograde changes characteristic of *resolution* set in. There is one condition in which I have seen the state of red hepatization remain for days without any appreciable effort at resolution. I allude to these cases of croupous pneumonia which supervene as an intercurrent complication of la grippe. In this condition I have seen the stage of resolution delayed for several days and the lung remain apparently unchanged. I offer no explanation.

Red hepatization or solidification, which I have designated as the climax or perfection of the first stage, is simply the filling up the alveoli and terminal bronchiæ in the diseased region, with a plastic material elaborated from the blood serum and leucocytes which have found their way into these cavities in consequence of the overdistended condition of the blood vessels surrounding them, and acting under a specific pathological stimuli. The plastic material thus contained in the lung parenchyma is firm, solid and adherent to the alveolar walls and, when cut, the hepatized tissue presents a red, rough and granular surface.

The process of resolution consists in retrograde and reparative changes, amongst the first notable of which is the bleaching out or disorganization of the red corpuscles, and the increased migration of leucocytes into the alveoli, changing the scarlet red appearance of the inter-vesicular matter and giving to the diseased tissue a grayish appearance, termed *gray hepatization*. The further progress of resolution consists in fatty and granular changes, and in breaking down by processes of liquefaction or solution of the matter in the alveoli and bronchial terminals, not well understood.

Portions of this plastic matter are partially dissolved, and expectorated in the form of granular masses and minute tube-casts, others are wholly liquefied, and expectorated, at first mixing with the excessive migrating leucocytes—constituting muco-purulent, later on mucoserous-discharges.

Early in the stage of resolution, as the air commences to re-enter the re-opening air vesicles, and in passing through the small bronchiae filled with tenacious matter, a minute bubbling sound is created both on inspiration and expiration, called sub-crepitant râle, which marks the commencement of resolution. Later on, when the larger bronchiae become filled with the same material, the same process produces large mucous râles.

These signs, with the re-appearance of resonance over the diseased region indicate the progress of resolution. The expulsion of all products of inflammation by expectoration, a re-establishment or normal circulation in the blood vessels embraced in the area of actual disease and its surroundings, with the repair of bronchial and alveolar epithelium, constitutes the cure, and embraces the periods of resolution and convalescence.

In approaching the treatment of acute croupous pneumonia, it may not be amiss to lay down a few general propositions.

The disease is specific in character and self limited in nature. When not prolonged by intercurrent complications, intensified by overpowering predisposing agencies, or exaggerated by excessive suppurative processes or ulceration in the lung tissues, the tendency in to run a course of from seven to ten days, from the initial chill to the establishment of convalescence.

It is altogether a disease of a low rate of mortality, in which nature is capable of accomplishing a cure in a large proportion of cases, no matter what ordinary treatment may be pursued or whether treatment is instituted or not.

This accounts for the general success which we hear reported from the most diverse and conflicting methods. From the homeopathic to the more potent colored water; from the spoliation of blood letting, mercurial ptyalism and tarter emetic to the conservative and supporting treatment of dietectics, quinia ammonias and strychnia, all report marvelous successes and low mortality.

While it is a disease with a generally favorable prognosis, yet it offers a rare field for intelligent medication. All do not recover, even under the best treatment; and especially when intensified by complications and vitiating influences, does it offer a scope for study and investigation unsurpassed in pathological study. There are a limited number which may be saved or lost, by proper or improper treatment. Indeed there probably is no disease calling for more nice and accurate knowledge of pathology and therapy than this, and none in which the intelligent physician can get a surer return for his knowledge and skill.

When complicated, it always terminates in a crisis; usually a critical sweat marks the advent of defervescence and permanent favorable change.

In the treatment of this disease, it is well to bear in mind that there are two great pathological processes to be kept in view:

First, the filling up of the air vesicles by the coagulation in them of a fibroplastic material resulting from a pathological condition brought about by a systemic poison operating through nerve influences upon an area predisposed to disease by other agencies. In other words, that the disease as we recognize it, is but the local expression of a systemic cause, and that the rate of mortality or the risk of life may practically be calculated by the extent of this process in the first stage, or that the danger to life in croupous pneumonia bears a direct ratio to the extent of *red hepatization*.

The other process is that of *resolution*, which sets in usually upon the completion of hepatization and is entirely one of repair, or nature's effort to remove pathological products, in which she is aided or retarded by the dynamic forces and vital resistance of the patient, or the absence of these.

It follows as a logical sequence, that the indications for treatment in the first stage are to counteract and prevent as far as possible, the tendencies to this process of solidification, and to antagonize any vice or toxic principle which may be depressing to vital resistance.

The indications in the second condition are to assist nature in her effort to rid the lung tissues of their pathological products, which is accomplished by liquefaction and expectoration; and to support the system under the irritation and spoliation consequent upon these efforts.

In carrying out the indications in the first stage, it will be well to bear in mind that the fibrinous coagulum contained in the air cells is the product of fibrinous elements in the blood, effused into the air-cells from the over-distended inter-vesicular capillaries coming in contact with ferments contained in or furnished by the leucocytes which have migrated into the field of disease.

Then it follows that the lowering of blood pressure and arrest of arterial tension and consequent engorgement of lung capillaries, will tend to prevent the effusion of fibrin principles, as well as the mi-

gration of leucocytes, and to that extent will retard or prevent the accomplishment of this stage. Again fibrin elements in the blood vary greatly under different conditions. They are always the product of retrograde changes in disease and of destructive metabolism in health, and are always exaggerated in inflammatory diseases, especially the one under consideration, hence such treatment as will lessen or prevent the elaboration of those principles in the blood, or neutralize them after formation, at the same time lessening the labor of the lungs becomes a disideratum in the treatment of the early stage.

Hence that class of remedies known as defibrinators and depressants of blood tension, have naturally been looked upon as valuable agents—if such were the trio, blood-letting, mercurials and tartar emetic, so popular with the profession a quarter of a century ago, and yet regarded with great favor by many. These remedies would constitute the ideal treatment in all cases of this disease, if it were not for their spoliation and permanent prostrating effects. Hence, except in well-selected cases, they are contra-indicated on account of the strong tendency to adynamia or asthenia (often erroneously termed typhoid) which demands in the latter stage all of the vital powers and reserve forces of the patient to meet the pathological ordeal. These remedies, however, are not only applicable but constitute the only reliable treatment in a limited number of cases. These are the dynamic or sthenic cases of pneumonia, occurring in persons with good integrity of blood and muscular contractility—in such as collateral edema is to be dreaded.

For a long time the lowering of blood pressure and liquefaction of fibrin products in the blood, have been sought to be accomplished by a line of treatment less depressing to the vital energies. The first is accomplished by the use of heart sedatives, such as veratrim viride and aconite; and the latter, by the employment of muriate of ammonia. This, I believe, is yet the most popular treatment of the day, in the early acute stage.

The objection to these powerful heart sedatives is that their effects are more or less permanent, leaving a heart inertia which proves detrimental to recuperative action in the more advanced stage.

Again, I fear that their paralyzing effect upon vaso-motor influence favors sluggish circulation and blood stasis in the lungs, at the same time that it lessens the *vis a tergo*, and thus often more than neutralizes the good effects they would otherwise accomplish.

I have been accustomed to endeavor to overcome this evil effect in these useful remedies by combining them with stimulating doses of quinine, which drug I regard as invaluable in all stages of this disease, being an arrester of molecular changes. It lessens the accumulation of fibrin elements in the blood and also, as established by the well-known experiments of Singer, it not only lessens the number of leucocytes but also arrests their amœboid migration from the blood vessels; thus striking at the very foundation of the processes which result in fibrinous coagulation and cell proliferation, which, as before stated, constitute the danger features of this disease. Besides, by its stimulation the brain, vaso-motor, respiratory and cardiac centers when given in small doses, it overcomes in a great measure the objections to verat. viride and aconite.

These remedies can be given in combination in capsules if desired, or can be given separately for the effect.

There can be no possible objection to the use of muriate of ammonia in the early stage. It may be given in from five to ten grain doses, every three hours, in solution, or, preferably, with sprup of wild cherry or tolu added; also an appropriate quantity of syrup or wine of ipecac.

Squills and other stimulating expectorants are to be discarded at this stage, to be taken up later on.

Tincture or infusion of digitalis is a remedy to which many practitioners are exceedingly partial, in the first as well as in the subsequent stages. Just how we can reconcile the employment of an agent which is universally conceded to be a heart stimulant and an intensifier of blood-pressure, in the treatment of a condition where we have acknowledged that the lowering of blood-pressure is indicated, appears parodoxical, and yet I believe that it is a valuable remedy. No doubt, there are others present who employ it as I do, from whom I hope to hear the rationale explained more fully.

Calomel given in several small doses, early in the disease following by a gentle purgative, I regard as essential for reasons which

must be obvious to all, but I would not press its use to the point of ptyalism, as was formerly the custom. When the temperature runs very high, despite the use of heart sedatives, there can be no objection, in my judgment, to the employment of one of the coal tar antipyretics to reduce it within reasonable bounds, but their employment further than this should not be persisted in.

When pain is a prominent and distressing symptom, which is usually the result of pleural complication, opiates may be employed with extreme caution.

Sinapisms, dry cups and warm fomentations to the affected side, each have a limited field of usefulness.

Blisters should not be employed in the early stage. Here I am convinced a great diversity exists in the practice of different physicians first, as to whether blisters should be used at all in pneumonia; next, as to the stage at which they should be employed. I have changed my opinion several times upon this subject and may change again, but at the present writing, with the lights before me, I would not employ them in the acute stage.

In treating this disease during the stage of resolution, different indications are to be met. Such agents as will aid in liquefying the products of inflammation, encourage expectoration, stimulate respiratory function and sustain and support the vital forces, are to be employed. Many of those used in the first stage are to be dispensed with, while others are to be retained with additions thereto. If blood-letting, tartrate of antimony, veratrim viride and aconite have been employed, they are to be discontinued. Calomel should be employed only occasionally after the first stage, for the purpose of maintaining the liver in functional activity and to protect the kidneys against vicarious labor.

Local treatment is no longer required except in the advanced stage of resolution, when, as is sometimes the case, the flagging vital powers seem to come to a halt. I have used large blisters over the diseased region with prompt and decided benefit. In some way not understood by us, blisters in this condition seem to arouse a renewed effort in the exhausted forces of nature.

The muriate of ammonia is to be exchanged for the carbonate, which is a needed, diffusible stimulant and respiratory tonic, as well as a solvent of the offending plastic material.

Quinine is to be kept up in the same dosage recommended in the early stage, for its tonic and stimulating effects.

Stimulating expectorants are to be employed now. Squills, senega, sanguinaria and ipecac may be selected. If all were used in combination, probably the prescription could not be improved.

As the stage of resolution progresses and expectoration becomes profuse, strychnia, with one of the mineral acids, may be advantageously added to the treatment.

Here digitalis may again be brought into requisition, to meet threatened heart inertia, but I believe that its greatest usefulness is in the early stage.

In cases of sluggish progress or delayed resolution without any evident cause, iodide of potassium may be added to the expectorant compound, in five-grain doses, three or four times a day.

A well-regulated dietary is as essential in this stage as medicine. Milk, meat-juices, broths, eggs, etc., should be allowed to the digestive capacity of the patient. When appetite and digestion are defective, they should be stimulated and aided by the use of bitter tonics, pepsin and dilute muriatic and phosphoric acids.

During the entire disease, the emunctories should be maintained in functional activity, the bowels gently open, the kidneys fortified against excessive work in eliminating waste matter, by the employment of some of the alkaline mineral waters.

The skin has an important work to perform, not only as an eliminator, but as a dispenser of hyperpyrexia through the evaporation of its secretion. Hence sponging with tepid and cleansing lotions should be kept up at seasonable intervals.

General glandular inertia, especially intestinal, with dryness of mouth, during resolution may be greatly relieved by the stimulating effects of turpentine, in five drop doses, three or four times a day.

Last, but not least, careful hygienic observance should not be neglected.

The open admission of pure air is a desideratum, but in such manner as to protect against currents and draughts.

CONTRIBUTION TO THE STATISTICS OF TYPHUS (TYPHOID) FEVER.*

DR. BERG.

1626 cases are considered, which were treated in the Leipsic Medical Clinic, from the beginning of 1880 to August 1, 1893. Comparisons are made with similar statistics compiled by H. Schultz during the great Hamburg epidemic of 1886–7. Since the end of 1888, all the cases have been systematically treated with lukemarm baths, varying to cool showering (*Uebergiessung*) in case of extensive lung involvement or marked disturbance of the sensorium, providing the recognized contra-indications did not forbid the use of baths. In most cases, not more than one or two baths daily were ordered.

Although there were marked variations from year to year, and from month to month, the following table shows the well-known preponderance of cases in the early autumn. [Probably a similar table compiled for the northern cities of the United States would show the maximum point to be delayed about a month. A. L. B.]

TOTALS, 1880–92.

Jan.	122	July	136
Feb.	96	Aug.	252
March	97	Sept.	240
April	78	Oct.	193
May	71	Nov.	150
June	75	Dec.	88
	Grand total		1598

All statistics agree that the great majority of cases of typhus occur in autumn and a comparatively small number in spring. [It will be noticed from the appended table that the years 1882, 1888 and 1893 form minima in an irregular curve. It would be interesting to note if a periodicity in the occurrence of epidemics could be demonstrated by a study of statistics for a long term of years. A. L. B.]

1880—113	1887—103
1881—178	1888— 82
1882— 88	1889—194
1883—194	1890—137
1884—138	1891—117
1885—120	1892— 97
1886—110	1893— 46

(estimated from the number reported up to August 1st, taking the average ratio for the entire series).

In only a limited number of cases was the etiology apparent. One hundred and forty-seven patients came from houses in which typhus had occurred; twenty-three female nurses contracted the disease at the hospital, and seven patients, entering the hospital for some other trouble developed typhus. But, of the seven, a local cause could be positively excluded in the case of four who developed typhus five to eight days after admission, and probably, in the case of the remaining three who developed typhus ten or twelve days after admission. (Can we be so positive as to the time necessary for incubation?) Various authorities give the following statistics of "typhus domesticus." [Apparently this term means typhoid fever developing in the hospital; in this sense, the percentage of Berg's total list of cases is 1.5; if we take the term to apply to all cases showing an apparent contagion or infection due to residence, Berg's percentage would be over ten. A. L. B.]

Liebermeister, for Basal,	2.4 per cent.
Alexander, for Breslau, .	3.6 " "
Goth, for Kiehl, . . .	5.5 " "
H. Schultz, for Hamburg,	.57 " "
Murchison, for London Fever Hospital, . .	.3 " "

A repetition of the disease was positively demonstrated in only one of our cases, that of a man who had typhus eleven years previously. Another case in which the patient was seized with typhus two months after the end of the first attack, is probably to be considered as a re-

*Condensed translation from the German Archives for Clinical Medicine, April 11, 1895, by A. L. Benedict, A.M., M.D., Lecturer on Digestive Diseases, Dental Department, University of Buffalo.

lapse. The frequency of repeated attacks is given as follows:

H. Schultz, ...	2.2	per cent.
Beetz, ...	1.8	" "
Freundlich, ...	2.2	" "
Goth, ...	2.	" "
Ours only, ...	.05	" "

According to age, the 1626 cases of typhus were divided as follows:

1	year—	3 cases.	.19	per cent.
2	" —	2 "	.13	" "
3	" —	7 "	.44	" "
4	" —	10 "	.63	" "
5–9	" —	46 "	2.80	" "
10–14	" —	86 "	5.4	" "
15–19	" —	359 "	22.4	" "
20–24	" —	434 "	27.	" "
25–29	" —	315 "	19.5	" "
30–34	" —	167 "	10 4	" "
35–39	" —	106 "	6.61	" "
40–44	" —	41 "	2.5	" "
45–49	" —	29 "	1.8	" "
50–59	" —	20 "	1.25	" "
60–69	" —	10 "	.63	" "
70–80	" —	5 "	.32	" "

Between the ages of 15 and 29 1108 cases occurred, almost two-thirds of the total number, and between the ages of 15 and 35 as much as 86 per cent. H. Schultz has found in a series of 3686 cases, that 56.8 per cent. occurred between the 15th and 25th years, and that 80.04 per cent. were included between the 15th and 35th years. According to Liebermeister, 19 per cent. of all typhus cases occur between 16 and 20; 58 per cent. between 21 and 30; 16 per cent between 31 and 40; thus 93 per cent. occur between 16 and 40. Freundlich tabulates 87.7 per cent. between 15 and 35. Other authorities also arrive at similar results.

According to our statistics, sex has an influence as well as age; in every period of life the male patients predominating. We have in all 917 men—62.2 per cent., and 709 women—37.8 per cent. Other authorities, for example—Murchison and Griesinger—maintain that both sexes are equally liable to typhus, and explain the majority of men by the circumstance that women are more unwilling to go to a hospital. The influence of sex does not extend to children, for we count 80 boys and 82 girls under 15, and H. Schultz finds 250 boys and 201 girls. However, there are not lacking authorities who claim that typhus occurs twice as frequently among boys.

Of our 1626 cases 243, 12.7 per cent., died. The proportion of fatal cases in the different years is shown in the following table:

Year.	Patients.	Died.	Males.	Females.
1880	113	22	13	9
1881	178	21	15	6
1882	88	6	3	3
1883	121	22	11	11
1884	138	10	7	3
1885	120	22	14	8
1886	110	10	7	3
1887	103	17	10	7
1888	82	9	8	1
1889	194	22	13	9
1890	173	31	14	17
1891	117	27	9	18
1892	9.	16	7	9
1893	28	8	4	4 (8.mos)
'80–'93	1626	243	135	108

The mortality varies greatly with different years. In 1888 18 per cent. died; in 1884, on the contrary, only 7 per cent.

The mortality, according to age, is as follows, Schultz's statistics for the Hamburg epidemic are added in the last column:

Years.	Patients.	Deaths.	Per Cent.		Per Cent.
1–4	22	3	13.6	—At Hamburg	4.
5–9	46	8	13.		6.4
10–14	86	7	8.1		8.1
15–19	359	35	9.7		8.7
20–24	434	60	13.8		7.7
25–29	315	37	12.		
30–34	167	25	15.		12.3
35–39	106	30	28.3		11.5
40–44	41	12	29.2		14.6
45–49	29	9	31.		18.5
50–60	20	8	40.		26.9
60–70	10	4	40.		
70–80	5	3	60.		

The table shows that, excepting children under 10, there is a constant increase of mortality with advancing years. On the whole the mortality of the Hamburg epidemic is less than in our series.

[The translator would suggest that American physicians are prone to report cases according to the known prevalence of a certain disease. For example many

colds and mild attacks of bronchitis have been termed "grippe" in the last few years, and probably in an epidemic of typhoid many simple cases of diarrhœa, febricula, malaria, etc., are reported to health boards as genuine typhoid, so that the aggregate mortality would tend to appear low. It is to be observed that the word "typhus," occurring throughout this article undoubtedly means *typhoid*, the qualifying adjective, *abdominalis*, being omitted.]

It is often stated that in children the mortality of typhus is low. This is not supported by our statistics. Goth also reckons the mortality of children with typhus as higher than between the ages of 10 and 25, and as high as between the ages of 30 to 35.

Liebermeister states the mortality of male patients at 12 per cent.; of women at 14.8 per cent. Murchison gives 17.68 per cent. and 18.89 per cent. respectively; H. Schultz 8.8 per cent and 9.4 per cent. On the other hand, Goth gives a higher male mortality for Kiel, and Beetz for Munich.

It was found that the prognosis became worse the later in the fever the patient entered the hospital. The duration of the fever, excluding relapses was as follows:

Up to 4	weeks, 73	per cent.
" " 5	" 16	"
" " 6	" 8	"
" " 7 or more,	3	"

The duration with children was no less than with adults. Of 154 patients under fifteen, 75 per cent. "fevered till four weeks," and 25 per cent. longer.

The time of convalescence was 20 days in 50 per cent. of all cases; 40 days in 39 per cent.; 60 days in 5.8 per cent., the last group including, almost without exception, those with sequelæ.

Including under the term recrudescence (Nachshub), a renewed rise of temperature, swelling of the spleen and rash in the period of regression, this phenomenon has been noted 63 times—3.3 per cent. H. Schultz notes it in only 1.8 per cent. of his cases. In four patients, a repetition of the recrudescence occurred; in one of them there were three in succession.

Genuine relapses occurred more frequently, 210 times, or in 12 per cent. of the cases. Authorities differ widely as to the frequency of relapses. The statistics vary from 3 per cent. to 17 per cent. in different epidemics. In the present series, there is a great difference in the annual statistics as to relapses. Relapses occurred in 108 male patients—11.8 per cent. and in 102 females—14.5 per cent. Relapses occurred relatively more often in children than in grown persons. Of 1462 adults, 179 or 12.5 per cent. had relapses; of 164 children, 31, or 19.1 per cent. Other statistics support the same conclusion. Schultz and von Ziemessen also note a more marked predisposition on the part of women. The influence of the previous typhus on the relapse is noticeable, in that the latter follows by preference a light attack of fever. Of our 210 relapses, 75 per cent. followed light or moderately severe cases. A similar percentage is given by von Ziemssen, Liebermeister, Steinthal and Goth, while H. Schultz states that relapse occurred after 236 severe cases, and after 260 cases of moderately severe or mild fever.

The beginning of the relapse varied between one and 77 days after defervescence. 24 relapses began after 1 or 2 days; 32 after 3 or 4; 20 after 5 or 6; 32 after 7 or 8; 25 after 9 or 10; 29 after 11 or 12; 12 ofter 13 or 14; 8 after 15 or 16; 5 after 17 or 18; 4 after 19 or 20; 8 after from 20 to 30 days; 3 after from 30 to 40; 1 after 77 days. Most of our relapses lasted from 6 to 20 days. 20 had a duration of five days or less; 92 of from five to ten days; 90 of from ten to twenty days; 18 of over twenty days; the longest lasted 72 days. The results of the relapse was in most instances favorable: 7 times, (not quite 3 per cent.) death occurred. According to H. Schultz, 4.1 per cent. die of the relapse.

The rash was positively present in 80.4 per cent. of all cases; doubtful in 5.6 per cent; never present in 14 per cent. The spleen was enlarged so as to be palpable in 69.4 per cent.

There was a great variation in the stools, as noted:

	Cases	Per Cent.
Continued diarrhœa occurred in	480	25.6
The movements were normal throughout in	83	4.4
Constipation persisted in	307	16.4
Diarrhœa and normal passages alternated in	144	7.7
Diarrhœa and constipation		

alternated in	550	29.3
Diarrhœa, constipation and normal passages in	62	3.3

There was a predominance of diarrhœa and constipation with two or three days without a passage and then three or four days of thin stools.

In 103 cases, 5.5 per cent. of intestinal hemorrhage were noted. Former statistics regarding hemorrhage vary between 2.5 per cent (Bülau at Hamburg) and 16.6 per cent. (Murchison at London). Griesinger gives 5.3 per cent. for Zürich, and Goth 5.9 per cent for Kiel. The first bloody stools appeared:

Between the	1st	and	5th	day	in	23	cases,
"	6th	"	10th	"	"	37	"
"	11th	"	15th	"	"	35	"
"	16th	"	20th	"	"	15	"
"	21st	"	25th	"	"	9	"
"	26th	"	30th	"	"	8	"
"	31st	"	40th	"	"	4	"
On the	55th		day	in		1	case.

In other words, three fourths of the hemorrhages began in the second week. H. Schultz states that 44.8 per cent. of his series began in the second week.

According to age. the intestinal hemorrhages are grouped as follows:

	per cent.
Up to the 15th year,	3.8
From the 16th to the 19th year,	3.5
" " 20th " " 24th "	4.2
" " 25th " " 29th "	4.5
" " 30th " " 34th "	9.4
" " 35th " " 39th "	9.
" " 40th " " 49th "	12.5
" " 50th " " 59th "	12.
" " 60th upward,	14.3

That is to say, the liability to hemorrhage increases with advancing years, except that children have the same liability as adolescents. Schultz gives 1.05 per cent. as the frequency of intestinal hemorrhages in children during the Hamburg epidemic, but Henoch puts it at 2.9 per cent. Sex appears to have no influence.

The number of bloody stools was as follows:

One in 35 patients; 2 in 24; 3 in 18; 4 to 6 in 16; 7 to 10 in 3; more than ten in 5. The highest number was 17. The mortality of typhus patients with intestinal hemorrhage amounted to 38.2 per cent., against 20.9 per cent. in Hamburg, according to Schultz. 1.8 per cent. of all patients had bloody stools before their death. Note that it is not stated that these patients owed their death to the intestinal hemorrhage; indeed, there are included in this number several who suffered an intestinal perforation, or some other serious complication.

15–2 per cent. of the women with typhus were pregnant. All were in the twenties, except one who was forty-one. No birth at term was observed. Of the 15, only one in the seventh month of pregnancy, was discharged pregnant; abortion occurred in eleven cases and premature delivery in three. Abortion occurred once in the second month of pregnancy; once in the third; twice in the fourth; three times in the fifth; four times in the sixth. The premature deliveries occurred one in the seventh month and two in the eighth; all three fœtus lived. Abortion occurred twice between the fifth and tenth days of the disease; once between the tenth and fifteenth; three times between the fifteenth and twentieth; once between the twentieth and twenty-fifth; once each at the twenty-eighth and thirtieth days. In two cases exact information is wanting

A twenty-two year old woman was admitted on the third day after delivery, and one thirty-two years old, on the eighth day. The latter succumbed and, and on autopsy, there was found, besides the characteristic typhous lesions, diphtheritic endometritis.

Of the pregnant patients, five died, three after abortion and two after premature delivery. Section showed diphtheritis of the womb. Our mortality in this class of patients amounts to 33.3 per cent., against 7.8 per cent. according to Schultz, at Hamburg. So far as we can depend on these statistics, gathered from the observation of a small number of patients, we can conclude, (1), that pregnancy is almost always interrupted by typhus; (2), that the course of the fever is more unfavorable than with other women, and (3), that the life of the fœtus is not endangered through the sickness of the mother.

Meningitis symptoms, stiff neck, violent pain in the head, etc., were noted in ten cases, all of young women. Psychoses were noted twenty times, in 1 per cent., they consisted mainly of melancholic conditions and usually appeared during the fever, rarely during the convalescence. Two

cases were noted during relapses. Several times, marked cataleptic symptoms were observed. Individual neuralgias were noticed, but not neuritis.

Pneumonia occurred 167 times, in 8.9 per cent. of all cases. The right lung was more frequently affected than the left; most of the cases were hypostatic, a single one of fibrinous nature. Death occurred in 14 per cent. of the pneumonia cases. Bronchitis was found in two-thirds of all patients. It was usually slight and of brief duration; in 3 per cent., it was severe. Pleuritis was observed 13 times; 6 as dry, 5 times as serous, and twice as suppurative forms. Eight cases were complicated with phthisis.

Intestinal perforation occurred 42 times, 2.2 per cent., including 25 cases in men and 17 in women. Age seemed to have no influence on the occurrence of perforation. Ten cases occurred between the tenth and twentieth days; thirteen between the twenty first and thirtieth; six between the thirty-first and fortieth; one each on the forty-sixth, fifty-sixth and sixty-fifth and sixty-eighth days. In twelve cases exact information is wanting, H. Schultz gives the percentage of perforative peritonitis as 1.6, .6 less than in this series.

Albuminuria is not especially frequent; namely, in 212 cases, or in 11.3 per cent. H. Schultz puts it at 12.6 per cent. for 1886, 9.4 per cent. for 1887. A number of cases entered the hospital with albumin in the urine, so that no accurate statement can be made as to the duration of the albuminuria. In 75 per cent. of the cases, albumin was first found in the third week. In 25 per cent. albuminuria first appeared in the fourth, fifth and sixth weeks. This observation coincides with statements elsewhere made, that there is no fixed time for the beginning of the albuminuria, but that it most frequently begins inside the first week of the sickness. [The obvious contradiction must be due to a misprint; probably it is meant that 75 per cent. of the cases appear in the first week. A. L. B.] In a number of cases, the albuminuria persisted only a short time or, occasionally, only traces of albumin were detectable. Excluding these cases, there were 175, 7.7 per cent., of longer duration, of which half lasted till the tenth day, the remainder till the second, third or fourth week.

Nephritis occurred 53 times, 2.8 per cent., a relatively high proportion; Schultz at Hamburg gives only .9 per cent. Age had no influence in determining nephritis, but four-fifths of all the cases were found in males. The mortality of typhus complicated with nephritis was extraordinarily high, 44.4 per cent. Schultz gives exactly 50 per cent. for Hamburg. All the cases of nephritis were of the acute hemorrhagic type. Cystitis was observed 15 times, .8 per cent. It occurred at no definite time and lasted, on the average, a week, the prognosis being good. [No statement is made as to the possible infection by catheters. A. L. B.]

A long list of other complications is appended, but they appear to be purely accidental. It is significant that hepatic abscess, which is sometimes stated to be a *sequelæ* of typhoid, was observed only once. Dysentery [typhoid infection of the colon?] was seen three times, perityphlitis four times. Nose bleed, which is usually mentioned in the symptomatology of typhoid, was noted in only 3.1 per cent. of the cases, but this may have been due to delay in reaching the hospital.

The occurrence of death according to the week of the disease, was as follows:

1st	week	6	deaths
2nd	"	37	"
3rd	"	63	"
4th	"	51	"
5th	"	22	"
6th	"	20	"
7th	"	9	"
8th	"	7	"
9th	"	5	"
10th	"	2	"
11th	"	4	"

One patient died on the ninety-seventh day after admission, after an illness at home of unknown duration. In 17 cases, the time of death was not definitely mentioned. 7 patients died in relapses. The majority of fatal issues occurred in the third and fourth weeks of the disease. H. Schultz states that 59.1 per cent. of his series died in the first two weeks of their stay in the hospital, which is in substantial agreement with the present report.

Death was due either to the severity of the infection or to complications. The former cause is responsible for 89 deaths,

37 per cent., most of which are ascribed to heart failure.

Of the complications causing death:

	Cases	Per cent.
Intestinal perforation led to death in . . .	40	16.5
Intestinal hemorrhage led to death in . . .	19	8
Croupous pneumonia led to death in . . .	24	10
Parenchymatous nephritis led to death in .	11	3.7
Pyæmia and septicæmia led to death in . .	8	3.2
Acute hemorrhagic diathesis led to death in	5	2
Acute miliary tuberculosis led to death in .	3	1.2
Abortion and premature delivery led to death in	4	1.6
Embolism of pulmonary artery led to death in	2	

Perforated pyosalpinx, fatty degeneration of the heart, general peritonitis due to perforation of the vermiform appendix by a fæcal concretion, each caused one death.

A CASE OF GLYCOSURIA.

J. M. SHAFFER, A.M., M.D., KEOKUK, IOWA.

The patient was not seen by me, and all statements are *ex parte*. The attending physician requested that the analysis be made. He says:

"There are no objective or subjective signs of diabetes; but a medical man at her recent home (Tacoma, Washington), had found sugar in the urine. No analysis presented.

"Patient is a widow; mother of five children, all living and in good health, ages from forty-nine to thirty-two years. Antecedent family history excellent. She is sixty-seven years old; weighs 175 lbs.; perhaps there has been a decrease of weight in 10 years of 25 lbs. There is no special loss of strength; good appetite; sleeps well, an afternoon nap included; bowels regular; is well so far as she knows, except an eczema with pruritis about vulvæ. About one year ago, she had an attack of sciatica which confined her to bed three months."

Just prior to the analysis she had made a journey, unattended, from the Pacific coast to the Mississippi River to visit members of her family here.

Urinalysis made April 29th shows:

Quantity voided in 24 hours preceding, 57 fluid ounces (3¾ pints, 1 f3). Color, light yellow 2 (after Vogel).
Reaction—Superacid.
Specific Gravity, 1st test—1.039.
Specific Gravity, after 8 hours—1.036.
Albumen—No trace. Tauvet's test.
Albumen—No trace. Heat.
Sugar—Loaded. Fehling's imp. copper.
Sugar—Loaded. Hylander's bismuth.
After 10 hours, specific gravity, 1.036.
After fermentation with yeast, 1.008.
Grains of sugar to f3. 28.
Sugar in 57 f3. 3¼ oz.
Solids in urine, all, 86 in 1,000.

A sample of the urine voided April 24th and left exposed to ordinary temperature has, after six days, no odor, and application of Fehling's improved copper test shows it *loaded with sugar*.

The only point made in this case is that glycosuria may exist, even to a very great extent, without presenting any of the urgent symptoms laid down as especially belonging to the disease. Moreover, that diabetes may exist and the patient or the doctor not know it. It is not needed that citation be made from THE MEDICAL AND SURGICAL REPORTER to indicate this.

In my long experience as examining surgeon of the Pension Office, two cases, where a claim for "kidney complaint" was made as the basis of a pension, are noticeable. One was a soldier from a neighboring State, had visited Colorado for his health; he never suspected diabetes; but his urine was much like above in analysis. This was subsequently verified—that is, the presence continuously of large quantities of sugar in the urine. Case lost sight of, but he may be pensioned for lumbago, or heart hypertrophy.

The other was a soldier also—his claim, deafness and rheumatism. His urine was loaded with sugar. He did not know it then; he does not know it now. He is a stout, active, splendid fellow now, and has

been. There has been no opportunity to verify or disprove the glycosuria of this case.

From these experiences it would seem that a very large amount of sugar may be present in the urine without any marked symptom or set of symptoms laid down as pathognoonmic of diabetes.

One of the old masters said, "*In omnibus morbis pectoris, ad urinam spectandum.*" Why not look to the urine in all sorts of obscure cases of illness?

COMMUNICATIONS.

ARTHRITISM AND SCIATICA.

DR. A. CLAUS.

Sciatica, also known as sciatic neuralgia and sciatic gout, is one of the most frequently observed forms of neuralgia.

It is therefore extremely interesting to discover whether the pathogenic theory which we have developed in the case of migraines and of the neuralgic manifestations of influenza, also finds here an application, or, in other words, whether the arthritic predisposition, setting aside any character of an infectious nature, is manifested in sciatica with that frequency which struck me in the study of the other neuralgias already mentioned.

One of my friends objected to me that arthritism was a conception of too vague an order, with too indistinct characteristics, to enable us to establish so precise a pathogenic relation. The usefulness of the efforts I was making to defend these ideas, which are scattered about in literature, was therefore to him not proven.

It will not be altogether useless, before attempting the study of the relations which exist more particularly between arthritism and sciatica, to consider the objections of my *confrere*.

Without entering into extended considerations upon general pathology I will say that among the physicians who nowadays make use of the word *diathesis*, some attach to it the significance of a morbid state, apparent or latent, while others whose tendency I share, simply designate under that name a general predisposition to contract a certain number of diseases which are supposed to have a common starting point.*

With Bouchard I admit but two diatheses: arthritism and scrofula, a diathesis being considered as a permanent disturbance of nutritive changes. It prepares, causes and maintains maladies varying as to symptomatic forms, anatomical location and pathological processes.

The arthritic diseases are: biliary lithiasis, gravel, obesity, the acid dyscrasia, oxaluria, diabetes, gout, rheumatic articular and subarticular affections, differing among themselves by the seat of the process, the evolution and the lesions, yet having some sort of relationship; it is the same family of diseases. The bond that unites them is the same disturbance of nutrition, a diathesis "that might be called oligotrophic, in order to indicate that nutrition transforms less matter in a given time, or oonotrophic to show the idleness of nutritive changes" (Legendre), and which Drs. Bouchard and Landouzy prefer to term bradytrophic. But custom has hitherto caused the adoption of the word arthritism, and the diseases of that family are called arthritic diseases, on account of the frequent existence among the individuals who present these diseases or in their parents of rheumatism and gout, united by the ancients under the name of arthritis.

The definition of arthritism being established, it remains to me, in order to answer my confrere's objection, to establish the frequency of the relations which are observed between neuropathic states and arthritism, and to demonstrate the usefulness of this pathogenic conception.

It is generally recognized, says Fréré*,

*Traite de Medicine Charcot, Bouchard, Brissaud, Vol. I.

* La famille nevropathique.

from whom we borrow the considerations which follow, that the neuropathic family shows close relations to the arthritic diseases, to such an extent that they are sometimes united into a mixed group, termed *neurarthritic*. One frequently meets in neurotics and in their family, rheumatism, and still more frequently gout. Baillarger had already recognized this relation of rheumatism to the neurosis in general. Thus the combination of rheumatism and hysteria is frequent; at times it is the articular affection which is the starting point of hysterical manifestations, and the two maladies may proceed side by side without influencing one another. In the same manner the association of rheumatism and epilepsy in the same individual is a very common event.

I have already noted the close bonds which unite chorea and rheumatism (Bouteille, Sée). Rheumatism, however, is not to be considered as a primordial cause of chorea; it plays, owing to its pathological relation with the neurepathic diathesis, the part of a particularly active excitant of the predisposition.

Fréré has observed a young woman who, while convalescing from articular rheumatism, was taken with chorea; an interesting point in this case was that the rheumatism, in this case, took on an hemiplegic form, while the choreic movements remained limited to the same side.

Rheumatism awakens the nervous diathesis, which shows itself by convulsive or delirious manifestations (rheumatismal mania of Burrond, Griesinger, Mesnet), according to the special predisposition of the subject. The same thing may be said of medullary localization.

It is in great part by reason of the relation of rheumatism and the neuropathic predisposition that one may account for the frequency of psychical manifestations in diseases of the heart.

As for the different forms of chronic rheumatism, their bonds with the neuropathic family are much closer, and one may expect to find them associated with a large number of neurotic manifestations. Fréré has seen hysteria tardily manifested in an arthritic woman who suffered from retraction of the palmar aponeurosia, an affection whose close connection with rheumatism is recognized.

Paralysis agitans appears to be connected with the rheumatic affections. Fréré has seen its development in an individual born of a gouty father and suffering from retraction of the palmar aponeurosis. A rheumatismal form of paralysis agitans has been described, capable of being successfully treated by antidiathetic medication.

Dr. Carpentier, who has spoken of the frequency of arthritic antecedents in the insane, has particularly insisted upon hæmorrhoids.

But it is especially in gout that nervous troubles are frequent and deserve our attention. They may be manifested as premonitory symptoms of the attack of gout or remain entirely independent of the attack, or show themselves as phenomena of the abnormal, abarticular form of gout; others, on the contrary, follow the attack of gout, and seem to be developed chiefly when the evolution of the articular affection has been disturbed, either accidentally through the sudden influence of cold or through some ill-advised intervention. The latter belong to the groups, so varied, of retroceded gout. These metastases, all the more frequent when the gout is of longer date, are the most to be feared, by their abruptness and intensity, and death may result as their consequence.

These disturbances may affect the central and peripheral nervous system in all its functions: mobility, general and special sensibility, intelligence. Charcot has called attention to the fact that all the forms of cerebral rheumatism, cephalagia, acute delirium, and even mania, may be well-nigh exactly reproduced by gout.

Among the premonitory disturbances are often met vertigo, gastralgia, irritability of the bladder, migraine, asthma, etc. Among the neuroses that are sometimes connected with gout, epilepsy must be noted. By the side of the co-existence of epilepsy and gout in the same subject, we also find the combination of both these diseases in families. Fréré has reported some interesting examples of these facts.

The uric diathesis in women may be complicated by hysterical manifestations.

Stoll and Barthez have observed cases of so-called gouty chorea. Among other accidents of retroceded gout Scudamore cites spasm of the diaphragm and of the abdominal muscles. Various authors have observed cases of gouty apoplexies and gouty aphasias; Garrod cites a case of

facial paralysis, which ceased the moment an attack of gout supervened.

Gouty mania has been observed by Whytt. Among spinal affections in the gouty we must mention a case of progressive muscular atrophy seen by Dr. Potain.

Neuralgies are very frequent in the gouty, and migraine especially so. Among visceral neuralgias, gastralgia must be especially noted.

Besides these neuralgias mention should be made of the cramps, which precede or follow attacks of gout.

The gouty nature of neuralgias is sometimes clearly shown by the happy effects of treatment: thus Begbie gives the instance of sciatica in a gouty patient, which was cured by colchicum. Personally I have insisted upon the good effects I have obtained with salophen in the treatment of migraine and of the neuralgies of influenza. I shall soon take the opportunity of showing analogous effects in the treatment of sciatica.

Among sensorial troubles attributable to gout have been cited disorders of vision. Some authors speak of gouty ophthalmias.

Nervous troubles are also very frequent in diabetics and they show the closest analogy with those observed in the gouty. Independently of the nervous manifestations of diabetes, the latter may, in the patient, coincide with characteristic nervous affections.

I can hardly insist further. I believe that this review of the subject which might be extended to all the arthritic maladies, and especially to obesity, will demonstrate to the most sceptical the narrow relations existing between the arthritic family and the neuropathic group.

We must now examine the usefulness of this pathogenic conception.

In nervous pathology especially, if one wishes to reach a rational therapeusis, truly pathogenic, we must endeavor to bring back the diverse manifestations to general causes which, once understood, alone will allow of useful and rational intervention.

Physiological therapeutics, at bottom, do not differ from systematic therapeutics. In both the notion of the disease itself is eliminated, the idea of natural evolution disappears.

The imperfection of these methods is nowhere more strikingly shown than in nervous pathologym and especially in the treatment of neuralgias.

It is not sufficient that a substance should be considered as being analgesic to justify its employment in all painful manifestations. If it be true that pain is essentially one, it were hardly scientific to forget that from the etiological and pathogenic standpoint it possesses varieties of great diversity. It sometimes is due to an anæmic state, or may arise from a congestion or an inflammatory state, etc., of the nervous fibres or cells. This is not all. These are most frequently but immediate causes, bearing an affinity to more general causes. If we do not regard the constitutional state and all the pathogenic elements, we will, notwithstanding the clearest symptomatic and physiological indications, follow a wrong road and fail to obtain the desired effect.

Those analgesics which very often are prescribed without the slightest reflection, have for the greater part a well determined elective action. If salophen, the study of which we are especially engaged in, possesses an incontestable analgesic effect, it is because it possesses primarily an antiarthritic action, arthritism being under such circumstances, one of the essential factors of the element pain.

The name sciatic gout given to sciatic neuralgia especially puts in evidence the relations existing between the arthritic diathesis and this special neuralgia. It seems to me useless to weary my readers by prolonged compliations. Rheumatism gout, diabetes and obesity are the principal etiological factors of sciatica.

If the pathogenic questions which we have advanced are true, the therapy derived from them must afford the evidence and show their usefulness and value.

It would be easy for me to justify the ideas I have just advanced by personal observations. I will limit myself, however, to the relation of five unpublished observations, which my confrere Dr. Paul Walton has been kind enough to communicate to me. I desire to thank him for his great kindness.

Observation I. M. X., 30 years, suffered from rheumatis sciatica in the left leg since four years. The attacks, which are extremely painful, usually occur in the middle of summer and in the beginning of winter. Has never shown any symp-

toms of arthritism, but his father is gouty and has rheumatism. A brother has had mild attacks of gout. The first attack occurred after a stay at the seashore; each crisis is attended by a fever of slight intensity, but the very sharp pain persists from six to ten days, during which the patient is obliged to lie down, as the sitting posture, as is commonly observed, exasperates the pain. The patient has been subjected to nearly every form of treatment: revulsives, dry cups, massage, with aconitine, phenacetine. Salicylate of soda given with veratrim has given him some relief. This winter after the occurrence of a fresh attack he was given, from the first, salophen in the dose of four grammes a day, divided in four powders. From the third powder the pain disappeared as if by enchantment. The treatment was kept up for three days during which, as the patient no longer felt the slightest painful sensation he was able to attend to all his occupations, whereas formerly he was compelled to remain nearly absolutely quiet.

Observation II. Thomassin Leon, thirty-seven years, engineer, suffered since ten years from articular rheumatism. During a long sea voyage last December, he had a very violent attack of sciatica of the left leg. Being on a sailing vessel he could only receive the most primitive sort of attention. When I saw him for the first time, he was very lame, owing to a painful retraction of the thigh upon the pelvis. Very painful shooting pains follow the whole sciatic as far as the external popliteal. He was ordered a prolonged hot bath, and five grammes of salophen a day. On the next day the pain had entirely disappeared; the lameness also had nearly gone, and the patient now dares to extend his leg. The treatment was continued for four days. After this lapse of time the patient asserts that he no longer feels the slightest pain. A few days after he went to sea again on a prolonged voyage.

Observation III. Pauline Broecke, forty-three years, suffered several years with modular rheumatism of the fingers; since eight months has a right sciatica which does not give her a moment's rest. The right limb already shows a fairly marked muscular atrophy. Because of this I first advised massage; the patient returned after a fortnight saying that the massage did her more harm than good. I must here tate the movements had been practiced by a confrere who has perhaps not mastered all the peculiarities of that specialty. As the patient insisted upon relief of her pain, I prescribed salophen in doses of five grammes daily, during four days. I also ordered prolonged hot baths. On the second day of the treatment the patient was seized with an erythematous eruption affecting the whole body; the sciatic pains had about disappeared, but reappeared on the fifth day. The patient, having attributed the eruption to the drug, has stopped taking it. Upon my advice she began taking the salophen again, but only in the dose of two grammes daily, and kept it up for six days. At this time the patient stated that she was entirely relieved. The lameness has greatly diminished but the patient still drags her leg. The cure has persisted since three months. We advised her to take salophen again at the slightest return of the trouble, but, so far, she has not had to have recourse to it.

Observation IV. Baertsoen, Adolphe, thirty years, carpenter. Presents no arthritic taint, either personal or hereditary. Suffers from a left sciatica since several weeks. The pain is nearly continuous, but is exaggerated by work, the patient, owing to the needs of his trade, being obliged to stand all day. He dates the inception of his trouble from a traumatism received more than a year ago in the gluteal region; in handling wooden beams he was knocked down by some of them and had his thigh caught under a very heavy board. Excepting for a few contusions which did not even compel a rest, the accident had no further results; but six or seven months afterward the patient daily felt, toward the end of his day's work, lancinating pains starting from the glutei and radiating as low down as the calf. The pain became more and more acute and ended by becoming constant. Revulsives and vesicants were applied, and at the same time he was given a variety of analgesics. On the days when the pain was most severe it could only be assuaged by injections of morphine.

Considering the patient's history and the fact that he had undergone a traumatism, the diagnosis of traumatic sciatica was made. This form, as is known commonly, requires some surgical treatment (stretching, etc). Notwithstanding this I tried salophen in this case, and I must say that, without having cured the pa-

tient, this drug in a daily dose of three grammes has given him a decided degree of relief for two or three days. The patient declares that on the days when he takes the medicine the pain is as well relieved as by morphine, and moreover, the amelioration lasts longer.

Observation V. Beeckman, Henry, fifty years, peddler. This man states that he suffered during his whole life with rheumatism. Wandering as he does about the country in all weathers and in all seasons, he has experienced many hardships. After the rigors of last winter, and lacking sufficient fuel in his dwelling, he has lately, besides his rheumatic pains, felt very painful sensations in the sciatic of of his left leg. I first gave him salicylate of soda in the dose of five grammes a day, as I wished to save him the expense which the relatively high prices of salophen would have entailed. In three days he returned, saying that the rheumatic pains had about disappeared, but that his thigh was no better. I then gave him salophen, and, after about a week, he stated that he was entirely cured and had not felt so well since many winters.

The very interesting observations of Dr. Walton greatly simplified my task.

Four of these patients are manifestly arthritic. The first has a decided heredity. The gouty and rheumatic father has bequeathed to one of his sons a mild form of gout and to the second a typical sciatica. If the theory I have developed is true, it is probable that the sciatic neuralgia which affects one of them will unfortunately prove but a first step in the painful road of neuropathy.

The second patient has articular rheumatism.

The third has nodular rheumatism since several years, and the fifth has had rheumatism all his life.

The relation between arthritism, represented by rheumatism and gout, and sciatic neuralgia, is here manifest; it is by no means always as evident as in these cases.

Last year I treated a patient suffering from a well-characterized hemicrania. He also had painful irradiations in the left leg, not completely localized, but quite evidently related to the sciatic nerve. The patient had very irregular digestion, with alternating diarrhœa and solid stools. At the period of onset of the neuralgic pains, his urine contained an abundant deposit of uric acid, an incompletely elaborated product showing the diathetic imperfection of nutrition. There were no other arthritic symptoms, the therapeutical results show in a most distinct manner the pathogenic relation I am considering.

All the patients treated by Dr. Walton have improved under the use of salophen. Four were cured, and one only improved. The latter had no personal or hereditary taint; his was a simple traumatic sciatica. The arthritic element was lacking, and in him salophen could not display the whole of its analgesic action. Hence we can affirm that: Naturan morborum curationes ostendunt.

I must yet insist upon one point observed by Dr. Walton. In the third observation we read that Pauline Broecke while taking salophen, in the dose of five grammes a day, showed on the second day a very marked erithema. The patient thought she saw a relation from cause to effect, and attributed the trouble to the salophen. Once rid of her sciatica she contracted a cutaneous eruption, or, in other words, one arthritic symptom was replaced by another.

Was the salophen here at fault? Dr. Vulpian* mentions several observations of cutaneous rheumatism under the form of scarlatini-form eruptions and of chronic urticaria. He also observed a case of papular erythema occurring in a patient suffering from muscular rheumatism, and Vulpian adds that it is much more common to observe papular erythema during the course of acute rheumatism than of muscular rheumatism.

In the presence of these cutaneous manifestations of rheumatism, one may well accept with reserve the accusations that might be brought against salophen. The most one might say would be that while salophen has been able to cure a painful arthritic manifestation, it has been unable to arrest the production of a fresh cutaneous arthritic phenomenon.

The importance of arthritism, which is exposed in this study, shows the important role that salophen is called to play in nervous pathology. Unsuccessful cases excepting in a few instances of defective administration, are for the most part due to an insufficient analysis of the various factors which act in painful manifesta-

*Clinique Medicale de la Charite. 1879.

tions. If salophen acts as an analgesic in the most diverse sorts of pain, one must not forget that it especially acts in those in which it is able to exert its antiarthritic action.

These therapeutic considerations will amply justify me in having dwelt so persistently upon the exposition of the relations that exist between arthritism and certain neuralgias.—*Flandre Medicale.*

CORRESPONDENCE.

IRRATIONAL TREATMENT.

EDITOR MEDICAL AND SURGICAL REPORTER:

Reading the case reported in the issue for March 28, 1895, of a patient rescued from death by aspirating the heart, makes some of us old fogies who have always kept the lancet bright, "a little" hot in the collar, when we also know, that one or more times each year for more than the third of a century, some one has given to the profession his experience of what the lancet could do for pneumonia and rheumatism.

Dr. Sloan tells us that, "from the 17th to the 22d fair progress was made," though "no great relief was got from the pains." A persistently high and varying temperature and no relief from pain may be a satisfactorily "fair progress" from the doctor's standpoint, but would the patient think so?

I thought that every observing, as well as every reading physician had learned that if salicylate of soda did not alleviate the pains of rheumatism within three days, it was useless to expect it to do so at all; and that it was equally useless to continue its use longer than seven days without an intermission, after which it may, though rarely, be resumed with benefit. Still the salicylate was increased, "and digitalis added to *strengthen* the pulse, which had been of *fair strength,* regularity and volume." There is science for you! The horse may be tired towards night, so do not spare either whip or spur in the morning.

Previous to the 24th, the symptoms, as given, strongly suggested venesection, but on that day demanded it, and the neglect of its use can be called hardly less than criminal. Had he then judiciously bled the patient, and followed that with appropriate treatment, he would not have seen that horrid picture he has pen-painted of a "livid, anxious countenance, palor of the lips, the working of the alæ nasi, the dilation of the veins of the neck and increased general restlessness."

It makes us hot. Still, we know that there are a few men who now use the lancet, who regarded it with little less than horror twenty years ago. And—and we "*hope the world do move.*"

Too many doctors get their knowledge of the actions of drugs at second hand, or as the public does its patent medicines, already prepared, put up and labeled, with "for full directions see inside of the wrapper." It is almost as easy as falling off a log, and saves an infinite amount of time and study. Had Dr. Sloan acquired a thorough knowledge of the primary and remote actions of the remedies by careful personal observation, he would not have prescribed antipyrine, salicylate of soda, nor salol, for he would have known that not a single one of the coal-tar derivatives was indicated at any stage of the—case as reported.

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SATURDAY, MAY 18, 1895.

EDITORIAL.

INSANITY.

During the latter half of the passing century, intelligent investigations within the realm of the mind have developed results, for scientific value and practical utility far in excess of the combined speculations of preceding eras in authentic history. Medical men and psychologists have brought to bear upon all phases of insanity, the wisdom acquired from devoted study and special opportunities for observation and experience, with the result that many old theories and most old practices have been relegated to the limbo of barbarism.

Certainly a great step and most humane has been the substitution of kindness for cruelty, and of care and gentleness for harshness. Under a broader and deeper public spirit, communities have developed a keener moral sense and have learned somewhat of the care and consideration due those suffering the most awful calamity of human existence. Philanthropic and economic considerations have joined with advanced knowledge to make more humane and successful the treatment of mental maladies, although, even now, the harsh regime is not a thing altogether of the past. Too often, we yet find under a single general superintendence (incompetent to manage any), the functions of almshouse, prison and lunatic asylum, with little of intelligent distinction made in the treatment of crime and of disease.

Study is wisely directed to causes, characteristics and methods of treatment. Amelioration and improvement of both physical and mental conditions are more carefully looked after. It has been demonstrated that the malady sometimes is capable of cure.

Interest in the problems raised by these mental and moral anomalies and disorders to which human beings are subject is not confined to a few specialists. The law attaches peculiar importance to the opinions of medical men who have the opportunity of observation upon the question of mental capacity.

With respect to the powers and facul-

ties of the mind, in reality, we can know nothing. We know them only as they find expression in action.

Every physician in extensive general practice has repeated experiences in this connection, and, with his prejudices and sympathies aside—and they should be aside in the interest of the public, justice and social order—he should, of all men, be the most competent to give a just, sound judgment and one not based upon hypothetical statements, but upon actual observation and experience.

"It is a well settled practice of our courts," says an eminent jurist, "to admit the opinion of educated, practicing physicians upon subjects of medical science.

"Until quite a recent period the disease of insanity has not been made a specialty. That it is now made a special study by a small number of physicians may be a good reason for giving to their opinion greater weight, but it is not a sufficient reason for excluding the opinions of other physicians. It is well known that various classes of diseases, as those of the ear, eye, spine, skin, lungs, kidneys and abdominal troubles have become specialties, especially in our large cities, where such division of labor becomes practicable. But this fact does not render incompetent upon these subjects the testimony of other physicians, who must necessarily have less experience. The difference is in weight rather than in the competency of the testimony. The far greater number of issues as to sanity fall within the ordinary range of a physician. A physician of large experience could scarcely be found who had not been often called to consider and form an opinion upon the capacity of his patients to make wills.

"Supposing the question was as to the gradual decay of the faculties of the testator from disease or old age, one cannot but see that the opinion of an intelligent family physician, familiar with his patient's infirmities and watching them at every stage of their progress, would and should have far greater weight with a jury than that of any number of physicians who had made insanity a special study, but who were called to give an opinion upon what is always, and necessarily, an imperfect statement of the facts and symptoms. Or, if the case were one of an original defective capacity, the judgment and opinion of the old family physician would be worth more than that of the masters of the science, who can have but a fragment of his history. To put upon the stand a skillful physician (and such an one has never understood the bodies of his patients unless he has known also something of their minds and the action of one upon the other), to get from him the history of his patient, the state of his bodily health, his conversation, his conduct, traits of character in sickness and in health, and then to exclude the opinion which, as the result of all, his mind has almost insensibly and necessarily formed; and yet upon this imperfect history of this patient, to ask a perfect stranger to that patient to give his opinion of his mental condition, because he has made mental disease a special study, would be to reject the most valuable evidence, for that which, in the nature of things, must be of far less worth."

Mental disorder or incapacity, as they are called in question, either in civil or criminal procedure, must for all legal purposes be judged by the manifestations in conduct or language. Symptoms of insanity, which only physicians can perceive and which have no apparent effect upon one's ability to transact business, are not enough to vitiate one's civil contracts, nor to enfranchise from responsibility for criminal acts. Sanity being the normal condition of the mind, the presumption always is that the party was sane at the time of doing or committing the act. This presumption stands until overcome

by a preponderence of evidence in favor of insanity at the time of the act.

There can be but little doubt that juries are sometimes misled, at the expense of justice and social order, by considerations raised by the testimony of some expert or specialist with some pet metaphysical theory.

The more certainly punishment is inflicted for violation of the law and breaches of social order; the more closely and scrupulously the question of insanity is looked into when made a plea of defense; the more soberly and conscientiously juries weigh the so-called expert testimony, the less we will hear of the plea of insanity, and proportionately less crime committed.

Mischief and failure of justice often lies in a careless, perfunctory and insufficient investigation of all the phases of a case by some theorist, some one with an hypothesis to support. Courts have hesitated in grappling with a question which has been claimed to be purely medical, and medical men have failed to agree or to clear the subject of its confusions.

It is somewhat encouraging, however, that medical as well as psychological science has repudiated many old theories repugnant to the safety to society and to the truth of science as well.

The courts have advanced to recognize diminished responsibility on account of abnormal conditions. Homicide in hot blood is not murder but manslaughter; and there may be circumstances which reduce murder from the first to the second degree. All this is correct enough and responds properly enough to the better dictates of humanity, but such diminished responsibility does not enfranchise the criminal and set him loose on society, too insane to be punished for crime and too sane to be kept in restraint.

Wise laws rigidly, impartially and judiciously executed, do much to enlighten and keep enlightened the mind, conscience and moral sense of the citizen. It is within only a comparatively recent period that insanity has been admitted as an excuse for crime. The danger now is that the field of irresponsibility will become so enlarged that few criminals will be convicted. There is some risk of too great broadening of the definition of insanity, both by courts and specialists; too much indulgence of morbid philanthropic sentiment, thus increasing the number of the class who set up insanity as a defense or excuse for criminal acts.

The history of many cases spread upon our criminal records furnish a wide basis of facts for the truth of "method in madness," so called.

The Use of Vaso-Constrictors in Cardiac Disease.

Wilcox (*Med. Record*) speaks of the value of vaso-constrictors in cardiac disease. In patients in whom the cardiac disease is secondary to disease of the arteries, vaso-constrictors are not indicated. In an under-compensated heart, irrespective of whatever valvular lesion may exist, we can, by the use of these remedies, exactly regulate the amount of work which the heart is made to perform.

Obviously, by narrowing the calibre of the peripheral systemic arteries and arterioles, we may increase the obstacle to the flow of blood, and thus to a nicety regulate that which the left ventricle is called upon to do. By thus regulating the work of the left ventricle we may set up hypertrophy of muscular tissue in its walls, and in this way bring about compensation. Not only does increased blood pressure result in more blood being sent into coronary arteries, but more efficient cardiac contraction, and a more rapid circulation in the cardiac muscles, thus improving the nutrition of the heart. If it be asked in what circulatory condition digitalis finds its most useful indication, it can be said, as Fothergill long ago pointed out, that it is when the pulse is rapid, broad, and of low tension. It is here that passive congestions are most frequently found, and hemorrhages are apt to occur. Digitalis is useful because it acts as a vaso-constrictor, slows the heart, thus prolonging the systoles more perfect.

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TENNESSEE STATE MEDICAL SOCIETY.

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INTRA-CAPSULAR FRACTURE OF THE HIP-JOINT.

(See page 689.)

DISCUSSION.

DR. PAUL E. EVE: I have not had any experience with the Senn apparatus, but I would desire to explain a device, which I believe is in some respects at least as good and simpler. It is a device by Simpson, of New York, and is very similar to the wire corset used in spinal diseases. It is laced upon the upper two-thirds of the thigh, and also around the hips, having, if you please, a well-adjusted pad to hold the trochanter major, that has the same purpose as the screw the doctor has represented in the chalk delineation. The object of this wire dressing is to be used after the plaster of Paris, which is supposed to encase the part as far as the knee. Of course a description of it would entail an exhibit to some extent of the appliance; that, of course, we do not care to do, nor could I make a very graphic description of it upon the blackboard. But it is new, and anything that offers anything in the way of union in these very unfortunate cases certainly ought to be had recourse to.

The doctor suggested that in some cases union was had, if not bony, a ligamentous one; and in many cases an incomplete one. I cannot agree with the gentleman, or go so far as to believe that in any number of intra-capsular fractures there is no union at all. Although I take the same ground he does, that in every instance where we have these hopeless cases, instead of thinking a certain time must be passed in bed with some apparatus until the callous thrown out is sufficient to protect the spiculæ of bone and then the patient be placed in a wheel chair and allowed to eke out a miserable existence, I believe, whatever the age of the patient or wherever he is, in public or private practice, in the country or in the city, we should insist upon immobility. We should insist upon an attempt to have bony union, ligamentous union, or whatever you please to call it. I have had recently in care a lady, ninety-two years of age. She was very intelligent, and after giving her the discouraging features, for such they must be called, of treatment and showing to her that very possibly she would die, she consented to the treatment and I got a union—what kind I do not pretend to say. It may be only fibrinous or simulating a bony union and hence termed ligementous. But she is able to walk on crutches now, although ninety-two years of age. I put the plaster of Paris casing on to the knee and up to the umbilicus, and had I not, she would probably be in the grave now. Immobility should be enjoined. In too many instances, I believe, if the let-alone treatment had been other than the mere suggestion that union would not take place and death would claim the individual in six or eight months, it may be, that with any advice, perhaps only the sand-bags, we would get good results.

The doctor has very ably advocated a treatment I have followed sometimes, that is employing, in old women or men, no difference what the age, a suitable device to enjoin absolute immobility. The results cannot be harmful with a proper device, whatever it may be. We have too many forerunners to show the bad or injurious effect of such treatment, and when they are contra-indicated they can be removed and perhaps some other device used instead. An encasement is needed in every instance, or a device of some kind, whether it be the Senn, with which I have had no experience yet, or something else. But we should insist upon an active treatment in every case. We don't know what we are going to get until we try

DR. BAXTER: Closing discussion; The points I wished to call attention to and emphasize to my mind were very important. In the first place, the ordinary splint, or the ordinary routine treatment for intra and extra-capsular fractures. Intra capsular fractures with extra capsular splints, is wrong. You need something more in these cases than the treatment for extra-capsular fractures. I believe a result not usually attained could thus be obtained. It is our duty to immobolize the limb, to prevent those things which ordinarily occur in the very old from this fracture—the least of which is being entirely and completely bedridden; second, death from pneumonia; and third, fatty embolism, due to the absorption of these particles directly during the inflammatory period. I doubt whether any man who has lost an old woman from intra-capsular fracture and has failed to put her limb up, has not directly contributed to her death. This point to the aged is exceedingly dangerous, and the death comes in such a way as can be avoided by proper retention of these splints until the inflammatory period has passed by. Then if we have no union we can give them up properly.

My paper is a protest against the do-nothing policy. The dressing I have referred to is composed of iron woven into the plaster dressing, and has a screw to press against the

trochanter in the direction of the lower fragment. Senn's object was to counteract the effect of the loosening plaster after a day or two. Whether he so intended he does not affirm, but it does accomplish the retention of the fragments in cases where they were not retained before. Any case of intra-capsular fracture must have pressure in the direction of the neck, to overcome the action of the short thick muscles of the thigh.

J. S. Cain, M.D., Nashville, discussed a paper on

CROUPOUS PNEUMONIA.

DISCUSSION.

DR. THOMAS L. MADDIN: There are several points I wish the speaker had dwelt upon more exhaustively, and these points I shall present for consideration.

In the first place, I am not prepared to ignore the wisdom of past time. The question presents itself—the doctor did not discuss it, he took it for granted that the present day and age puts a negative conclusion in reference to this point, whether or not pneumonia can be aborted. When I commenced practicing medicine, a doctor would be thought a fit subject for a suit for damages if he was called to see a case of pneumonia in the early stage and didn't bleed it. I remember when I was attending lectures and listening to the distinguished Dr. Drake on this subject. Dr. Drake, on the subject of pneumonia, said: "Gentlemen, if anything can cure pneumonia it is depletion, venesection. To give you an illustration, I was called to see a gentleman for pneumonia. When I was called he was in the first stage. What was I to do? Let him sit upon the bed-side, or sitting up, bleed him to syncope. Bleed, gentlemen, to effect. And what is the effect. It is syncope. And what did syncope do? It stopped local determination to the seat of inflammation. It stopped all the pain, and if you stop all the pain, doesn't it help the patient and indicate the case if brought under the influence of the remedy?" In the '50s, nobody thought of attending a case of pneumonia in the early stage without venesection, and it was invariably to bleed to syncope; and syncope meant a stopping of determination to the seat of inflammation. If you stop local determination to the seat of disease and relieve the pain, you help your patient. Then what did they do? They gave opium, calomel and ipecac. They repeated this a few times and followed up with quinine. The patient under this treatment convalesced. You may say I am an old fogy! Well, I am not done with the bleeding yet. When Dr. Drake called to see the patient in the evening, and found the pulse full and pain present, what did he do? He bled him again to syncope and it took 20 ounces of blood to bring him to syncope. Well, is he going to get well now? Dr. Drake said he thought he would:

"I visited the patient in the morning and the fever was up again and the pulse high, and what did I do? Why, gentlemen, what could I do? I bled him again, and thought of course the patient would be convalescent when I came in the evening. But how was he in the evening? The pulse was rapid, there was difficulty of breathing, and fever, and I bled him to syncope again. And," said he, "gentlemen, if you will believe it, he died *notwithstanding*."

Gentlemen, that is the way to practice medicine. Stick to your convictions.

If the patient dosen't get well, it is not the doctor's fault. But, Dr. Drake may have been a little too absolute in his venesection.

I am going to talk along the line a little further. I am in favor during a storm, when there is danger, of throwing over-board all the freight in a ship you don't need. Therefore, I will throw overboard all the unnecessary blood in the patient, when he has plenty of it to spare; because, if you don't spare it, what will take place? It forms a great dam in the circulation of the lungs that presses the blood back. The blood cannot get through, and you drive it on through the inflamed lung. I am going to trim the ship for a clean run. What is going to take place if you don't bleed your patient, and, sometimes, even if you do. The patient, possibly, is going to die. And how is he going to die? Where is the tendency to death? If there is any stumbling block in the way, remove the stumbling block. If the man does come out crippled from the loss of blood, remember he can lose blood better than anything else. Men can lose blood better than money. It is the easiest thing to make blood, especially when you have plenty to eat. By bleeding, you enable the patient to assimilate better. Fresh blood is better than stagnant venous blood. If one lung, or a half of a lung, is involved, the entire volume of blood has to go through the lung; not through the diseased lung, for that is a stumbling block If I cannot remove the stumbling block, I will go around it rather than break my neck trying to go over it. I would bleed, in order to stop local determination and make the blood go slower, for the faster it goes the harder it runs against the stumbling block. You thereby have the oxidation increased. The danger is, if you please, edema of the brain; the danger is, if you please, over-distention of the right side of the heart; and in proportion as you have distention of any organ there occurs paresis of that organ. If the bladder is distended with urine one cannot urinate. You have to use a catheter. But you have no catheter to empty the right side of the heart when the heart is over-distended, the superior and the inferior venæ cavæ distended and the little capillaries distended. That distension reaches to the brain; and so far as that reaches you have a congestion; by a venous congestion you kill the vitality of the brain; and inasmuch, as you kill the vitality of the brain, you injure the capacity of the heart to contract. Wherever you have passive venous congestion, you have edema. Gentlemen, what is the best remedy right here? I would bleed the patient. If I have a patient whose bladder is over-filled, I can use the catheter and take the urine away. If I have venous blood doing no good but poisoning the pa-

tient and producing edema of the brain, don't you think it would be well to bleed and relieve the over-distention by opening the external jugular vein?

DR. C. HOLTZCLAW: In our section of the country, pneumonia is a comparatively rare disease. Pardon the personality, but this subject of pneumonia is quite a painful one to me. It is an unpleasant subject to me, for the first four cases I had when I entered upon the practice of medicine, were pneumonia and every one of them died promptly. There seemed to be an epidemic of pneumonia in the neighborhood. The fifth case was also one of pneumonia, but was saved from an untimely death by an accident. The patient drank 36 doses of tartar emetic, which I had ordered for the depletive effect.

Without making any remarks or comments upon the pathology of the disease, I want to present one idea as to treatment. It is an idea I got from one who was the finest physician, the most careful observer, the best therapeutist and the most successful man in the treatment of pneumonia that I ever heard of. His treatment was the administration, as soon as possible, of a teaspoonful of calomel.

Venesection has gone out of fashion, and we bleed the patients differently now. Whether the large doses of calomel (60 to 150 grains) were given to deplete, I do not know. In the second stage, of course, it would not be advisable to give it. Then other treatment is called for. But, in the early stage of pneumonia, after the administration of 60 or 100 or even 150 grains of calomel, the next morning you will be surprised to find that the pulse has gone down, the pain becomes less and the temperature lower. But this is not to be repeated. In the old bleeding process, within 12 hours the process is reported, but with calomel this does not occur. Don't take the trouble to weigh it out. There is no danger of the calomel remaining in the system. It will take care of itself. It does no harm, I can assure you. I have never had a death from pneumonia under this treatment, and you will always find it extremely satisfactory.

DR. W. D. HAGGARD, Nashville: I wish to endorse what has been said as to the ability of the physician to abort pneumonia. However, I believe it can be done more effectually than in the way Dr. Maddin has outlined. Given a man such as he described—a stout, healthy man, with a full, bounding, quick pulse, pain and hyperexia, then bleeding to syncope is a most valuable part of treatment. I believe there is nothing we have ever had comparable to bleeding under such circumstances. I believe it is unfortunate for the world that venesection has virtually passed away. I believe it would be well if it were restored to its former position in the practice of medicine. But, after the first venesection I could not repeat it, as did Dr. Drake, or as did Dr. Bartholow when I was a student, because I believe we have a better remedy in the heart sedatives. You may commence with the heart sedatives after you have once depleted the system by withdrawing twenty ounces of blood, or you need not use the blood-letting at all, but commence at once with the heart sedatives. I feel confident, in this way, pneumonia has been aborted. The patient should be brought thoroughly under the heart sedative, whether in the form of a venesection or in the form of the tincture of aconite or tincture of veratrim viride. What you want is to reduce the pulsation of the heart; you want to relieve the great blood-pressure.

I should certainly prefer the heart sedatives to the frequent repetition of blood-letting, and I put myself upon record as very much averse to the practice referred to by the distinguished gentleman last upon the floor. That practice would not be endorsed at this time.

I arose to put myself upon record as believing pneumonia can be, has been and will be aborted; and the better we understand the pathology and therapy of the disease, the better we will be able to abort it. This is best done in the first stage.

DR. J. A. WITHERSPOON, Colnmbia:—Pneumonia, being one of the most common diseases we are called upon to treat, and one we more frequently disagree upon, possibly, than any other, should attract attention in any medical body. I must disagree with most of the gentlemen. I don't believe that the ideas, so prevalent here to-day, in the treatment of pneumonia, should be exercised in any one case. Pneumonia is a disease that is liable to attack people of different constitutions, and the patient should be treated more than the disease. I do not think it is wise for us to outline or map out any line of treatment in pnenmonia.

I agree with Dr. Maddiu's idea of venesection, but I should limit it to a few cases—the plethoric—those full of blood, where I believe it may be applicable. But I don't believe that in pneumonia, blood-letting for pain in necessary. I do not believe pain is a symptom, especially of croupous pneumonia. It is an indication of a complication of that disease.

Further, I would differ from Dr. Cain. I don't believe bronchial breathing is a symptom of the first stage in pneumonia, but that it is a symptom of red hepatization, or the second stage. I understood the doctor to outline certain pathological findings, how they were produced and why they produced certain symptoms. I believe he claims the inflammation does not produce the exudation. I believe the inflammation, or the inviting of blood to that part and the production of a hyperæmia of that lobe, is the result of the specific cause of pneumonia itself, and it is this irritation which invites the blood to the part, produces a dilatation of the capillaries and hyperæmia and the accumulation of fibrinous material. We have, in the first stage, a stage of engorgement, as the doctor said. What does the engorgement mean? It means the blood-vessels are filled with blood. Next is the stage of congestion, when, by the diapedesis of the serum of the blood, the fibrinogen being acted upon by the fibrin ferment forms the exudate that takes place in the air vesicles, and forms the exuda-

tion that is to follow. Now, until that exudation and until those air-vesicles are filled, you will still have a roughness, or vesicular breathing. But when that is closed, then through the solidified lung you will hear tubal breathing. I claim the tubal breathing is found in the second stage. What is the crepitant rale due to? The Doctor explained that it was due to a sticky exudate formed, an inflammation of the part, and the pulling of it apart, as it were. If you have a pulling apart of the vesicles, you have a vesicular and not a tubal breathing. I grant you the tubular breathing is symptomatic, but I believe only of the second stage.

I believe in the use of digitalis. It seems to me it would be extremely bad policy for us to use a drug that acts upon the heart only by stimulating the inhibitory nerve center, which, by laying its inhibitory hand upon the heart shortens its beat and carries more blood to the vascular system in the lung. Therefore, I do not believe digitalis is applicable to the first stage, but it is applicable to the second stage, especially because we have the breaking down of the exudation. It is then you want a slow, deliberate beat to throw the blood and open up the vascular channels that have been closed. Then is the time, and the only time in my humble opinion, we can afford to use digitalis in the treatment of pneumonia.

As to the red hepatization, or the third stage. I cannot understand how it is possible after the exudation is produced, for us to cut it short. The stage of red hepatization does not last long, at any rate, but passes to the gray hepatization very rapidly. It is the hurrying of this stage we desire. It is in this stage I have gotten my best results from the use of the blister. I use the digitalis and strychnia to stimulate the heart.

One other question in the treatment of this disease. Dr. Cain recommends the use of syrup of ipecac and various remedies at this stage to assist in getting rid of this exudation. To give ipecac and such remedies in the third stage, when there is need of strengthening of the action of the heart, of perfection of the action of the stomach of thorough assimilation of nourishment, in my opinion, is not well directed treatment. One remedy, which has a bad effect upon the stomach, however, in some cases, is the iodide of potash. I like the iodide of potash, I like, in the first stage, the cotton jacket over the chest and then, if I have tardy resolution, I bring to my assistance the blister. In the condition of heart clot, I have been struck with the propriety of a suggestion by one of our Southern men, of intravenous injections of salt solution just as you treat shock. This is used by a physician in Birmingham. When the pulse has become very feeble, the nose open, the eyes sunken and the cheeks prominent, he uses a 2 per cent. solution of salt, and the pulse rises almost as if by magic. I have never tried it, but I was struck very favorably by the method. With that, and believing that each case should be treated on its own merit and according to the conditions found in the case, under no routine. I consider we have the best means of meeting and combatting this disease.

Dr. G. A. Baxter, Chattanooga: Concerning the danger of heart-clot in this disease. Dr. Cunningham, of Chattanooga, reported 92 dissections of croupous pneumonia, and in about 50 he found, and exhibited at the Tri-State Medical Society, heart-clots.

Dr. Crook, Jackson: I can endorse what has been said about pneumonia being aborted. It is plain to me that any acute inflammatory affection can be held in check if you hold down the temperature of the body.

Another thing the essayist did not refer to, although he went over almost the entire field: He did not speak of the use of alcohol; nor has that been mentioned. I have frequently, as Dr. Cain said, changed my opinion, but it does seem to me we can get along better without alcohol than with it. My mainstays are digitalis, strychnia and quinine.

Dr. S. W. Sanford, Union City: I wish to relate an experience. I never saw a case more thorpughly aborted, than one which took thirty drops of croton oil; and he didn't die, either. Another point. Dr. Cain in enumerating the antipyretics, I believe, overlooked the one that in my opinion is the best of all, that is Salicylate of ammonia. With it you get all the antipyretic effect desirable without the bad effects so often experienced from the coal-tar remedies.

Dr. Deering J. Roberts, Nashville: Much has been said about venesection, but I think, with the ideas I have of pneumonia, the proper views of venesection have not been taken. The gentlemen who advocate it look forward to it just as was done forty years ago to bleed some, to bleed again; others would limit it only to full, plethoric individuals.

It is not so much the individual as it is the time when you perform venesection. If you can bleed the patient in the stage of hepatization, the patient has already bled himself into the cavities of the lnng. A lobe of the lung will hold a pint to a pint-and-a-half of blood. Therefore, a solidified lobe will contain, perhaps, a pint or a pint-and-a-half of blood. Later in the stage, a little bleeding may take some off the lobe, but one must be cautious in late bleedings, and they must be limited in amount. Hepatization commences at one spot and gradually extends. You have to watch it closely; and you may not be called until solidification has taken place. You can then only, at some future day, take some off the lung. I care not how old or young, how weak or strong the individual may be, if you can diagnose the disease in the stage of hyperæmia before there is any great solidification, bleed according to the amount of vascular supply in the individual and you will do more towards arresting the disease than by any remedies we have. The pendulum swung too far when bleeding was entirely stopped. I cannot but think, from my experience and observation and from the observations of others with more experience than myself, than in the past thirty or forty years many lives have been lost from pneumonia

because we have not used the time-honored lancet.

A gentleman who has often raised his voice and wielded his pen in favor of this remedy, Samuel D. Gross, read before the American Medical Association, an excellent article, on "A Lost Art in Medicine." He laid stress upon the time the lancet should be used. You must bleed your patient before he has bled himself.

In the early stage of pneumonia, or the state of hyperæmia, what sounds we have? Before dullness or crepitant rales come on, there is increased resonance with absence of the ordinary murmur. In the stage of hyperæmia, the blood vessels have distended and made tense the alveoli of the lung over a limited area. In other words, you have exudation in lower lobe. I have noticed this repeatedly. It commences usually below or in the middle lobe, but may be in the upper lobe, and when, perhaps a half of the lung has been lost, it is too late to bleed except you find the right heart struggling with too great a load; then take out blood until the vitality of the patient, with the other remedies, will eliminate the material from the lung.

I wish to endorse what has been said as to iodide of potash. Some 18 or 19 years ago, Dr. Flint advised the use of the iodide of potash, but did not give any reasons. I tried it in large doses, and to my surprise the bronchial tubes cleared up almost as if by magic. Since then I have been using it in pneumonia. Instead of waiting day after day using stimulating expectorants to get rid of the refuse matter, I put the patients upon full doses of the iodide of potash, five to ten grains, three or four hours apart. And what is the result? The lungs become cleared up. It acts as a resolvent. The material is absorbed. I regard it as of invaluable use in this disease. Strychnia and digitalis I reserve for use in the later stage of protracted cases, for maintaining strength from vigorous cardiac systole in preference to the frequent, rapid systolic movement that wears the heart out. As for blisters, I rarely use them. Warm fomentations to the chest, a hot bran bag, hot poultices made slightly stimulating by mustard, if you please, and capsicum, are of use over the side involved, and have an advantage in the relief of pain through the anodyne influence of the heat. In protracted and stubborn cases, where in spite of all remedies the lung would remain solid or approach to purulent exudation. I have occasionally seen valuable results follow the use of a large blister. Where I begin to dread that, or apprehend it is close at hand from the duration of red hepatization, I resort to the full large blister, getting rid of it as quickly as possible afterward, with very satisfactory results. I know a number of gentlemen, fairly successful in the treatment of pneumonia, who blister at once. I do not like to blister at once, because it keeps me from interpreting what is going on.

Dr. N. C. Newman, Normandy: The statement by the gentleman who has just taken his seat, that it is not necessary to bleed a patient who has already bled himself, is not according to my view. In a plethoric individual, with the lung solidified, you are very likely to have edema of the brain, and for that reason bleeding is indicated. If you have edema of the brain, in all probability you will not be able to overcome it with anything short of bleeding.

In reference to digitalis. Some of the gentlemen prefer strychnia and some object to the use of digitalis. One of the great sources of death in pneumonia is heart failure. Now, in the later stages, when the heart is enfeebled, digitalis slows the action of the heart, strengthens its systolic force, gives greater time between the beats of the heart, allows the ventricles to fill better, stretches the vital India rubber of the aorta and feeds the heart through the coronary arteries, which are the only arteries in the heart whose beat is synchronous with the beat of the heart. As the heart is strong in its force, having been properly fed after the use of digitalis, it is better able to do its work. So we give digitalis not only for its effect as a nerve stimulant, but also for its nutrient effect, especially its secondary effect. If you have depleted your patient by venesection in the beginning and are afraid of heart failure, you must enjoin the recumbent posture and give digitalis in small doses, very frequently repeated, for the secondary and nutrient effect.

Dr. O. C. Omohundro, Nashville: I prefer the iodide of ammonia to the iodide of potash, and think it fills the indication better. A remedy more recently suggested is simple bicarbonate of soda. Those are the only remedies I can think of besides those that have been already mentioned.

Dr. T. J. Happel, Trenton: There is one feature of this paper upon which I want to congratulate Dr. Cain, namely, the fact that he does not accuse the wonderful microbes of producing this wonderful disease. It is about the only disease in the discussion of which, in the Tennessee State Medical Society, I have not heard attributed to the microbes. It is true the essayist said one of the theories is it may be due to a microbe. But I want to congratulate him. I think the microbe is sent there to clear out and not to produce the disease. Food is furnished in the lung where it grows and the microbe is intended in this case, not as a disease-producing or disease-causing agent, but as a simple curative agent. It helps eliminate the material from the lung. Dr. Witherspoon struck a feature I wish to emphasize, too. That is, it is the patient and not the disease we have to deal with. I have always believed that if I find a case of pneumonia suitable for bleeding, I shall bleed it. I have practiced medicine in Tennessee for quite a while, but have not as yet found that case. However, if I do, I will bleed it and bleed it freely.

I wish to mention a case I had been treating for pneumonia and dismissed as relieved. He took a severe cold and developed a double pneumonia, as I believed from the history. When I was called I found the vessel by the side of the bed half full of blood, which they

said was half of what the patient had expectorated that night. The lung was greatly cleared up by the bleeding. The point I wish to make is that we do not see these patients in time to bleed them. We ordinarily see them in the second stage, after the time for bleeding has passed.

We can abort the disease, as suggested by a previous speaker, by the use of veratrim viride. I do not rgree with Dr. Holtzclaw as to the value of large doses of calomel. We rarely see cases of pneumonia in the first stage and don't get too much for the patient. In the stage of hepatization there is no time for bleeding. Nature will do the work there very well. You may have to control the temperature. In the third stage, although a large number of cases will get well without treatment, if treatment is demanded medicinally, we need digitalis and strychnia. I agree with the preference for iodide of ammonia to the iodide of potassium. I do not believe in expectorants—squills, spices, sanguinaria and things of that kind—and I only give them where there is a prejudice in the neighborhood, and then I tell I am not in favor of them. If you keep your patient in proper condition the material will be taken up by the absorbents. It is not intended the material shall be thrown off by expectoration. Let your patients alone; don't disturb your patient's stomach; tone him up. If the lung does not clear up rapidly, I would then, and then only, apply the blister. I would keep the surface reddened, preferably by turpentine steepes, or by the use of the mustard plaster. These I use, protecting the chest, of course, from changes in temperature when removing the application.

DR. J. D. PLUNKET, Nashville: The fact that a disease has so many names as croupous, fibro or lobar-pneumonia, tells us the cause of that disease was unknown to the earlier clinicians and pathologists; but I believe when I say croupous pneumonia is a microbic disease I voice the ideas of most bacteriologists.
Finding the specific cause of the disease; cultivating it through several generations; then inoculating animals and producing the disease, typical in every manifestation. I think if this exists in some 95 or 96 per cent., it has great weight in determining the cause of the disease. But, in respect to the older school—those who have laid great stress on the influence of cold producing this particular kind of pneumonia—it does seem there might be something in the idea. Whether or not there is, remains for the future to reveal.
hen this disease attacks one individual in a family and then another and another member, until the entire household is prostrated with the disease, independent of age, condition of life, hygiene, and everything taken into consideration it confirms or strengthens the belief that croupous pneumonia is of a microbic or specific origin.

As to the treatment of pneumonia I have but a few words: When anybody becomes a routinist in the treatment of any disease, whether it is croupous pneumonia or any other, I believe that medicine is not his harvest field. You take a child prostrated with acute inflammation and the whole of one side below par; you don't think of bleeding an individual like that. You will not apply a blister to a very young child; I don't do it myself. But here is a disease where I believe every case is a law unto itself. You have an individual with a strong acting heart, bounding pulse, flushed face, a little pleurisy and perhaps a little pain which annoys him. Bleed him and he is relieved from the inconvenience which he suffered.

It has been said that pneumonia is the great enemy of old age. How often are we called to see an old person, presenting no well-marked symptoms of pneumonia, with a little rise of fever, say to 101½° or 102° accelerated respiration, may be; no cough, pulse possibly a little accelerated? The patient grows rapidly worse, sinks, dies and at the post-mortem find a croupous pneumonia, involving either the greater part of one lung or one lobe or the croupous process attacking isolated spots in both lungs. If we take the disease in the adult, say eighteen to thirty years of age, we will see the typical manifestations of fibrous-pneumonia. But take it in children, two to four or five years old, as we have seen it many times, and the little child, apparently perfectly well, will go in and tell his parent, "I am sick"; he develops a little cough, butdoes not expectorate; there is accelerated pulse and respiration, and a high temperature. We should examine the condition of the lungs, as to the presence or absence of croupous pneumonia, because we often find it in children without the usual signs of the disease.

DR. J. S. NOWLIN, Shelbyville: There is a discrepancy in the theory of the gentlemen who hold that pneumonia is caused by a microbe, yet advise a line of antiphlogistic treatment. Now it is either true that pneumonia is an inflammatory disease, from the result of inflammation, or it is the result of a specific disease. If it is the result of a specific disease, it should have specific treatment, such as is germicidal and will remove the cause.

Dr. W. K. SHEDDAN, Williamsport. The subject has been discussed seemingly with the idea that an inflammatory condition could not be due to a micro-organism. I believe all inflammatory conditions are due to micro organisms. I am fully satisfied, from my observations, it is due to a micro-organism, and that the micro-organism has been very well described by Dr. Sternberg. It has been said that edema of the brain is due to passive congestion. I think the cerebral conditions, said to be due to edema, more are due to the action of the toxines than to any edema. I believe the irritative action of the toxines will explain this condition fully. One proof it is due to some germ or to something constitutional, is the fact we frequently have the most marked constitutional trouble as complications.

I notice in connection with the discussion of this subject the frequency with which gentlemen have alluded to the ability to abort. I wish to be recorded as believing that no case of true croupous pneumonia on

God's earth was ever aborted by any line of treatment. The fact we have no specific to destroy the bacillus of pneumonia is not a proof it is not a germ disease. We have no specific to destroy the bacillus of tuberculosis; we have no specific to destroy the bacillus of anthrax; we have no specifics to destroy a number of these bacilli, but that is no objection to the germ theory. When we find something to eradicate the bacillus of pneumonia, then they may talk of aborting; but it is useless to talk of aborting by venesection or anything of that kind. I would certainly, in any stage of this disease, most assuredly condemn cardiac sedatives. As I understand Dr. Cain's position, he regards the red hepatization as part of the first stage, and therefore he would find the condition he stated.

The use of ipecac has been objected to, but the gentleman immediately afterward recommended a blister, which would irritate the already worn-out nervous system, and for what? I have never been able to see any indication in this disease, in any stage, for the use of blisters. I think the comment upon Dr. Cain's ipecac much out of place if one is going to use blisters.

I treat every case according to the indications of the individual case.

Several years ago I was very much impressed by the idea of the use of cold compresses over the area of the lung. Two years ago I had the fortune to see a case of pneumonia in the early stage, that of hyperæmia, and I enveloped it in ice bags. My brother, following my suggestion, did the same thing with a number of cases. In some twenty cases we used the ice bags with absolutely no mortality.

DR. W. A. H. COOP, Nashville: I believe, reasoning from analogy, pneumonia is caused by some germ. I believe the mental depression and all that is created by the toxines, and the influence upon the heart probably has the same cause. The same cause may be an explanation for the presence of the leucocytes.

DR. J. S. CAIN (closing discussion): We have had every variety of treatment suggested, from full doses of calomel, thirty drops of croton oil, venesection, to very little of anything and not much of that. So you see there is a great variety of opinion about this disease, and it it a disease about which we, as a profession, are not agreed.

I did not undertake to discuss the microbic origin of pneumonia, but simply alluded to it and said I did not have time to discuss it.

A deal has been said about aborting the disease, blood-letting especially. I have nothing to add to what I said in the paper about blood-letting. I believe there are some few cases in which blood-letting is the thing to do, but I believe tartar emetic and blood-letting are not indicated in a great many cases. A great many patients when bled, even when blood-letting is not indicated, will get well, but I believe that is not rational treatment in one case out of a hundred. Like Dr. Happel, the case for blood-letting has not come to me for a number of years. Yet I would not disapprove of it in proper cases. Dr. Witherspoon took me to task about a physical sign. I said bronchial respiration is one of the first signs of bronchial or croupous pneumonia. I adhere to the opinion. Just so soon as the parts become engorged and the tissue loses its porosity it becomes a better conductor of sound and conveys to the ear of the diagnostician the sound of the air passing in and out of the tubes. When solidified it is a still better conductor. I find bronchial respiration before I find bronchial crepitation. It is the first sound.

I am sorry more was not said about the use of digitalis in the early stages of croupous pneumonia. I said in my paper I could not explain the reason why it should be used, because it seems to be contra-indicated, since it is a heart stimulant, and we want to use remedies to lower the heart's action. However, it not only stimulates the vaso-motor system, but also the inhibitory; and while it propels the blood with more force, it creates a space on the other side for the blood; keeps pure blood moving through the lungs and prevents stasis. I do not know any other explanation for it, but I believe it is one of the best remedies in the early stages of croupous pneumonia.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

A New Method of Making Palatable and Digestible Milk.

Dr. Robert T. Edes, of Boston, gives a valuable way of preparing milk where other methods have not proved useful:

A pint of milk is gently warmed. Into it is dropped, very slowly and with constant stirring, about twenty minims of the dilute hydrochloric acid of the United States Pharmacopœia. The milk should be stirred until it cools. In this way a very fine flocculent coagulum is produced, floating in the whey, which is easily accessible to the digestive secretions, while the whole fluid has lost somewhat of the flat and cloying taste which makes it unacceptable to so many. It will be noticed that milk prepared in this way differs from the various "wheys" in the highly important particular that the casein is retained and used, instead of being separated out as a distinct product, while it avoids the bitterness of pancreatinized milk.—*Boston Med. and Surg. Jour.*

SURGERY.

Effects of Modern Rifle Wounds.

The London correspondent of the *American Practitioner and News* writes that Prof. Victor Horsley has given an interesting lecture on the "Effects of Modern Rifles." First, Dr. Horsley showed some photographs of bullets in flight, demonstrating that in front of every bullet is a parabolic curve of compressed air, while behind it there are a series of little eddies of air rushing into the vacuum created by the flight of the missile. A tin canister was taken, and a ten-grain bullet having a velocity of 3,800 feet per second fired through it. There were two small holes in the canister. Then the lecturer filled a canister with some wet, soft substance, put on a lid and fired again. The lid of the canister flew off, showing that the bullet in its passage caused the hydrodynamic effect to be communicated right to the outside particles. An empty skull was then fired through, two small holes being the result; then a skull filled with water was treated in the same manner; this time the skull splintered and gaped. Dr. Horsley said these demonstrations showed that when a bullet is fired through a brain the substance is forced in all directions with violence and great pressure against the skull. Prof. Horsley has demonstrated by experiment that after the shock of a bullet through the brain the heart will begin again irregularly, spasmodically, but still it will begin again. The lungs will not. In his experiments the action of the heart and lungs of an animal were indicated by a system of pneumatic tubes and levers upon a chart. An animal under ether had a shot fired at it so as to glance off the skull. Both lungs and heart continued working unchanged. Then a shot was fired through the brain. This time the heart continued to go on irregularly, but the breathing ceased. The net result of these and other experiments was to show that, provided the action of the lungs could be restored, an animal might be shot through the brain and live. The brain with a passage forced through it is still pressing heavily against the sides of a skull. This must be relieved by trephining, and the conclusion arrived at by the professor is, that if a man were shot through the head and were treated first as if he were a drowned person until such time as trephining could be performed, his life might be saved.

BACTERIOLOGY.

The Transmission of Tuberculosis by a Brass Horn.

Dr. Addison S. Thayer, in the *Journal of Medicine and Science*, reports the cases of three young men, whose family history was good and who were themselves physically sound, who became infected with tuberculosis by using, as members of a brass band, a second-hand horn hired from a dealer. The possibility of tubercle bacilli being deposited in the convolutions of a horn to the danger of subsequent players cannot be denied. The three users of the horn in question were the only members of the band who did use it. Two of them are now in Colorado and one in Southern Pines under climatic treatment for tuberculosis. To make the chain of evidence complete it is only necessary to take the horn to pieces and find tubercle bacilli in the dried spittle in its convolutions and joints.

OBSTETRICS.

Pregnancy After Ligation of the Fallopian Tubes.

At the December meeting of the Glasgow Chirurgical Society, Drs. Murdoch Cameron and R. M. Buchanan, made a report upon the clinical history and post mortem examination of a case where pregnancy occurred after ligation of the tubes.

Two years before this conception the woman had been delivered by Cæsarian section of a healthy mature child. Dr. Cameron tied the tubes at that time. Four days after the last Cæsarian section the patient, who was a dwarf and rachitic, died of peritonitis, and the post mortem examination was made by Dr. Buchanan.

The right fallopian tube showed the constricted portion without any trace of lumen, while the left was pervious throughout, although the canal was much narrowed and the plications atrophied and irregular.

Dr. Cameron said that this was the first case in which he had ever found pregnancy to occur after ligature of the tube, and attributed the fact in this instance to his failure to tie the ligature sufficiently tight. He thought it would be especially dangerous to remove the ovaries at such a time when the veins were enlarged and sepsis might so easily be introduced, and therefore was accustomed to rely upon ligation of the tubes. In his last case of Cæsarian operation he had taken the precaution of putting on a double ligature, cutting between, and making such a separation that he did not think union could possibly take place.

Dr. Hector Cameron said he would not have thought *a priori* that a silk ligature would have permanently obliterated the fallopian tube. There was no analogy between that and an artery. It was fashionable nowadays, when tying an artery, not to try to sever the inner and middle coats; but he himself always did try to do so, and when that was done the reparatory process which followed was almost certain to obliterate the artery at that point. There was no analogy to this in the case of the fallopian tube, and it had always struck him that the method which Dr. Murdoch Cameron had described for his last case (double ligature and dividing between) was the right one and ought to ensure success.

The Cold Bath in Puerperal Septicemia.

Mace (*Archives de Tocol et de Gynec.*) strongly advocates this treatment. He has

collected seventy-four cases. They include seven deaths—three from peritonitis, one from pyemia, one from exhaustion after a long shoulder-presentation labor, and two from severity of the infection; the baths were given with too much timidity. The cold bath is contra indicated when peritonitis, phlegmon of the broad ligaments, or phlegmasia dolens exists. It has proved successful when grave maladies, such as measles, erysipelas, eclampsia, or bronchitis have complicated the puerperal infection. The obstetrician must not delay treatment when high temperature and general constitutional disturbance have set in. First of all, he must make sure that the uterus is free from products of conception. Then, should the temperature rise over 101°, the bath must be used. It is often of value when the temperature is low, the patient already suffering from headache and hot skin. The bath should be a little over 75° F. as a rule. Mace insists that it is right to leave the patient in till she shivers, especially when hyperpyrexia is the most marked symptom. In other respects the same precautions are needed as in typhoid fever. Subcutaneous injections of caffeine or sparteine should be given before the bath when the symptoms are severe, so as to counteract the tendency to syncope.

ARMY AND NAVY.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE FIFTEEN DAYS ENDING APRIL 30, 1895.

Fessenden, C. S. D., Surgeon; detailed for duty on Board for Examination of Officers Revenue Cutter Service, April 17, 1895.

Hamilton, J. B., Surgeon; granted leave of absence for 12 days, April 20, 1895.

Stoner, G. W., Surgeon; detailed to represent service at meeting American Medical Association, April 25, 1895.

Mead, F. W., Surgeon; detailed as Chairman Board for Physical Examination Officers Revenue Cutter Service, April 17, 1895.

Banks, C. E., Passed Assistant Surgeon; when relieved to report at bureau for duty as Chief of Purveying Division, April 24, 1895; granted leave of absence for 14 days, April 29, 1895.

Williams, L. L., Passed Assistant Surgeon; detailed for duty on Board for Examination of Officers Revenue Cutter Service, April 17, 1895.

McIntosh, W. P., Passed Assistant Surgeon; detailed for duty on Board for Examination of Officers Revenue Cutter Service, April 17, 1895.

Kinyoun, J. J., Passed Assistant Surgeon; detailed to represent Service at meeting American Medical Association, April 25, 1895.

Woodward, R. M., Passed Assistant Surgeon; to proceed to Ashtabula, Ohio, as Inspector, April 19, 1895.

Wertenbaker, C. P., Passed Assistant Surgeon; granted leave of absence for 10 days, April 16, 1895

Brown, B. W., Passed Assistant Surgeon; detailed as Recorder Board for Physical Examination Officers Revenue Cutter Service, April 17, 1895; granted leave of absence for 20 days, April 23, 1895.

Stewart, W. J. S, Assistant Surgeon; to rejoin Station at Washington, D. C., April 20, 1895.

Prochazka, Emil, Assistant Surgeon; to proceed to Evansville, Ind., for temporary duty, April 29, 1895.

Thomas, A. R., Assistant Surgeon; granted leave of absence, April 17, 1895.

NEWS AND MISCELLANY.

Deer Park on the Crest of the Alleghenies.

To those contemplating a trip to the mountains in search of health and pleasure, Deer Park, on the crest of the Allegheny mountains, 3,000 feet above the sea level, offers such varied attractions as a delightful atmosphere during both day and night, pure water, smooth, winding roads through the mountains and valleys, and the most picturesque scenery in the Allegheny range. The hotel is equipped with all adjuncts conducive to the entertainment, pleasure and comfort of its guests.

The surrounding grounds, as well as the hotel, are lighted with electricity. Six miles distant, on the same mountain summit, is Oakland, the twin resort of Deer Park, and equally as well equipped for the entertainment and accommodations of its patrons. Both hotels are upon the main line of the Baltimore and Ohio Railroad, have the advantages of its splendid Vestibuled Limited Express trains between the East and West. Season excursion tickets, good for return passage until October 31, will be placed on sale at greatly reduced rates at all principal ticket offices throughout the country. One way tickets, reading from St. Louis, Louisville, Cincinnati, Columbus, Chicago, and any point on the B. & O. system to Washington, Baltimore, Philadelphia or New York, or vice versa, are good to stop off at either Deer Park, Mountain Lake Park or Oakland, and the time limit will be extended by agents at either resort upon application, to recover the period of the holder's visit

The season at these popular resorts commences June 22d.

For full information as to hotel rates, rooms, etc., address George D. DeShields, Manager, Deer Park, or Oakland, Garrett County, Md.

—4-t. CHAS. O. SCULL,
General Passenger Agent,
B. & O. R. R.

THE
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ORIGINAL ARTICLES.

PUERPERAL ECLAMPSIA.

S. T. HARDISON, M.D., Lewisburg, Tenn.

In view of the oldness of the subject, the general knowledge with reference to it, the much that has been written about it, and the experience that most have had with it, I am sure whatever encounter you may have had with puerperal eclampsia has made an indelible impression upon your mind. No medical man ever forgets his experience with this disease; if disease we may call it, for I believe it is agreed that is only an expression of some existing pathological condition and not a disease *per se*. Nor is it found to be uniformly present when the known conditions that produce it are present; therefore it is exceedingly uncertain in its manifestations; coming when least expected, and failing to come when the most experienced attendants are led to foretell its advent from the symptoms present. But when it does come it is the one time in a doctor's life that he needs a clear head, a brave heart and a skilled hand, for he may expect every one else to be demoralized. The invasion is so sudden, so unseasonable, when the hopeful, expectant mother is buoyed up with the promise that in travail she shall be spared; the friends and attendants are cheerful, when without warning, all is changed to danger, gloom and sadness.

Eclampsia occurs most frequently during parturition; sometimes months before, and more rarely immediately after delivery. There is nothing distinctively characteristic or peculiar about the convulsions to distinguish them from other convulsions; indeed all convulsions are very similar, whatever the cause, whether produced by dentition or hydrophobia. So if it were not for the puerperal state, we might hesitate to decide whether we had epilepsy or tetanus. If the fits are repeated, the intermissions are of uniform length. I shall not further describe the symptoms; when once seen they will always be remembered and readily recognized.

Much has been written by our most learned authors in regard to the cause or causes. But their knowledge and the concensus of opinion has not been very emphatic nor conclusive. Many pathological conditions have been so frequently associated with it as to be chargeable with being causative factors. But not being able always to find these conditions present, we are forced to the conclusion that it is produced by a multiplicity of causes.

Primarily, I think we must have that condition of the nervous system known as convulsibility, the cause of which condition I do not know, but that it exists, all agree. By which it is understood that while there is no great departure from a healthy condition, at least nothing detectable, the least untoward circumstance, either mental or physical, will cause an explosion of nervous function, resulting in

convulsion; and one such manifestation seems to so impress the nervous system as to invite a repetition.

It is also universally agreed that faulty elimination from any of the excretory organs is a prolific source from which convulsions are induced. Possibly the kidneys are more generally at fault than any other eliminating channel, even if they be not organically involved. Probably we always have more or less irritation of the urinary organs in pregnancy. If we do not have mechanical irritation, we have sympathetic irritability which results in faulty and insufficient elimination and sooner or later produces a septic condition of the blood. As to whether this sympathethic or mechanical irritation is sufficient to account for the non-performance of the kidney, thereby producing sepsis, or whether there is something in utero-gestation itself as a physiological process which results in vitiating the blood, is a question that has been raised but has not been settled.

When the kidney is organically diseased, we know it is an important factor in the production of convulsions. But we must not forget that patients with chronic organic kidney disease in advance stages, do pass through utero-gestation and the process of parturition without convulsions. Therefore it will not do to conclude that the kidneys are responsible to a degree that will justify us in saying they are the cause. We have convulsions in some cases that seem to be in perfect health; all excretions normal in quantity and quality, not the least departure from a healthy condition, and we have to be contented by charging reflex nervous action. By doing this we concede that there is some abnormal irritation somewhere, possibly *in utero*, and when pressed for the cause of that irritation in a perfectly physiological process, we are stopped, and with our present knowledge have to defer exact explanation and definite statement, saying that reflex action with convulsability is most probably the cause.

In considering the treatment of puerperal convulsions, I shall divide them into two distinct and widely different classes. I do this because I think we need different lines of treatment. While patients are considered eclamptic, we must, I think, divide them into the sthenic and the asthenic; the healthy and the diseased; the robust and the feeble; the well-nourished and emaciated; the plethoric and the poor.

The first class we call sthenic—healthy, robust, presenting every indication of vitality, most likely to be a primipara—has not had an indication of disease since conception, but will say that her health has been unusually good. The first and only symptoms that the experienced accoucher regards with suspicion, will be a flushed face, a morbid activity of the mind, possibly accompanied with slight pain in the head, symptoms which are concomitant with the approach of labor. Suddenly, without further warning, a strong convulsion seizes the patient, that is so potent and terrible in its manifestation as to not only try the strength of her couch but in some instances to produce perceptible vibrations of the house. Here we have convulsability by reflex action, and without any known septic trouble.

Forty years ago the United States imported 72,000 pounds of opium; in 1880, 372,000 ponnds; and in 1893, nearly 1,000,000 pounds. This increase is largely out of proportion to the increase of population and the legitimate demands of medicine. The medical and surgical world were never more united upon any one measure than on the effort to discourage the use of opiates in many diseases where it was formerly thought and taught to be *sine qua non*.

Within the twenty years of my practice, I can see that not more than one-fourth as much morphine is used now as was used when I began work. The teaching of today is, when in doubt as to the propriety of an opiate, do not give it.

The medical profession, then, is not to be censured for the increase in the consumption of morphine. Its use is continually discouraged by all reputable practitioners of medicine.

Of course in the last stages of incurable diseases, such as cancer and such like, a sufferer is excusable if he uses the drug, but not otherwise. The physician is frequently unjustly blamed because Mrs. A., or B., or Mr. C., or D., uses an opiate. In not one case in a thousand of this kind should any blame attach to the physician, because had he or she never taken a dose of an opiate except when it was prescribed by the physician, there would have been no trouble; but once having found relief,

tient, and with her despondent, dreadful forebodings. She tells her attendant that she has not been well during the entire term of gestation, and she tells the truth, for her gradually increased septic condition has made life a burden to her. This class is seldom found among the primiparæ, and instead of mental activity we have dullness and despondency, the heart's action is feeble, with every indication of low vitality.

The treatment for this class must be conservative—no blood letting, no active purgation, but morphia hypodermically, hydrate chloral *per enema* to the extent of controlling the spasms; speedy delivery if possible, and when accomplished nutritious diet and stimulants, because although the spasms may have ceased, the danger is yet very great and the tendency is to die from exhaustion. However careful we may be with treatment this class will furnish a large per cent. of the death-rate attributable to puerperal eclampsia.

THE OPIUM CURSE AND ITS PREVENTION.

T. J. HAPPEL, A.M., M.D., TRENTON, TENN.

In a paper written a few years ago, entitled, "Morphinism in its relation to the Sexual Functions and Appetite; and its Effects on the Offspring of the Users of the Drug," I gave a detailed account of eight families in which the mothers were addicted to the use of morphine. Since that paper was completed and read, I have had occasion to note the effect of the drug in a few other families, and the results have served to confirm the views set forth in that paper, *viz.*: That the children of mothers who are habitual users of the drug, in the majority of cases die within a week of birth, cyanosed from an incomplete development of the heart. Second: That if they survive the first year, they are puny, delicate, nervous children, lacking in everything going to make up a well-equipped boy or girl, mentally and physically. Third: Should any of the offspring of such mothers attain to adult life, they become either morphine habitues, or drunkards. That the effect upon the mother is such as to transmit to her offspring the disease as a heredity, just as tuberculosis—not that the disease itself is transmitted, but that "a condition, a soil, a nidus, or whatever you may please to call it, is handed down to the child, and some fortuitous circumstance develops the disease."

If this be a true picture, and I am constrained to believe that it is, a great responsibility rests upon some one to proclaim the evil everywhere and to enforce every possible means of preventing it. The most important branch of medicine today is that of prophylaxis. Disease is easier to prevent than to cure. To cure this curse, the using of the drug must be prevented. Once in its toils, to abandon the use of it is one of the greatest undertakings. It has been truly and aptly said, that to abandon its use is to suffer the tortures of the damned. Further, without the full and free consent of the patient, and his or her hearty co-operation, to break the morphine habit is well nigh impossible. I would say nothing to discourage any one, but my own observation teaches me that it is far easier to abandon alcohol than opium. The using of opium is increasing daily. Public sentiment cries out more loudly to-day than ever before against the use of alcoholic drinks. Public opinion is against it. The dram-drinker is not countenanced in polite society. All business enterprises and corporations discriminate against those who use alcohol. The great railroad systems put as a first question to an applicant for a position in their employ: "Do you use alcoholic drinks of any kind? If so, how much, and what?" Not content with the answers of the applicant, his character upon that point is closely investigated at home where he is known. Should it appear that he uses intoxicants, he is at once refused a position. Further, an employee is at once dismissed if found at all under the influence of liquor. One drink is recognized as, to that extent, unfitting a man for a

trustworthy position in the employ of the company.

One of the most important questions in all life insurance applications is: "Does the applicant use any stimulant in the form of any alcoholic drink?" Should it be shown that he is a regular drinker, he is at once rejected. The fraternal orders are all blacklisting saloon keepers and bartenders.

These things are cited to show the current of public opinion. The retail sale of liquor is regarded by communities as disreputable, but are we not straining at a gnat and swallowing a camel?"

Forty years ago the United States imported 72,000 pounds of opium; in 1880, 372,000 ponnds; and in 1893, nearly 1,000,000 pounds. This increase is largely out of proportion to the increase of population and the legitimate demands of medicine. The medical and surgical world were never more united upon any one measure than on the effort to discourage the use of opiates in many diseases where it was formerly thought and taught to be *sine qua non.*

Within the twenty years of my practice, I can see that not more than one-fourth as much morphine is used now as was used when I began work. The teaching of today is, when in doubt as to the propriety of an opiate, do not give it.

The medical profession, then, is not to be censured for the increase in the consumption of morphine. Its use is continually discouraged by all reputable practitioners of medicine.

Of course in the last stages of incurable diseases, such as cancer and such like, a sufferer is excusable if he uses the drug, but not otherwise. The physician is frequently unjustly blamed because Mrs. A., or B., or Mr. C., or D., uses an opiate. In not one case in a thousand of this kind should any blame attach to the physician, because had he or she never taken a dose of an opiate except when it was prescribed by the physician there would have been no trouble; but once having found relief, the patient concludes that he can free himself from pain and at the same time save the cost of calling the physician, by bringing out the morphine bottle or the opium pill that had been put by for an emergency. Relief once obtained in this way, invites another trial; soon the habit becomes fixed and the party becomes a morphine habitué, or an opium eater or smoker.

Is the physician to blame in such a case? Nay, verily! He did right. The patient must shoulder the blame. The severity of the pain when the physician was called, demanded relief, and a relaxation of the spasm of the muscles was necessary before the cause of suffering could be removed. For this purpose the opiate was given. The physician had nothing to do with the subsequent doses. Had they not been sold to the patient, he would not have been tempted and would not have fallen. A dose of an opiate, excepting paregoric or laudanum, should never be administered, save as ordered by a physician.

On September 13, 1894, this fact was most forcibly impressed upon my mind. I was called to see a two-year-old child suffering enteritis. The patient has been well treated by the attending physician, but with no improvement. On consulting in regard to the case, a course of treatment was readily agreed upon, and it was remarked by the attending physician that he had not been able to quiet the child with what he considered full doses of an opiate, repeated every two or three hours. The mother, when called and questioned in regard to the dose of paregoric given, stated that she was administering a full half-teaspoonful every two hours, but that it had no effect upon the child. To an inquiry as to whether she had ever given the child any form of an opiate, she answered that she occasionally gave it a small dose of morphine; that she began using it for the relief of crying spells, when younger. Asked to show how much morphine she gave at a dose, she measured out a full third of a grain, for a child about two years old—fully seven times the usual dose. This at once revealed why no effect had been obtained from the medicines already administered. This dose of morphine was measured from a bottle produced from the family medicine shelf. No physician had ever advised morphine for the child.

Too often is it the case, the first investment made in a family when a child is born, is a bottle of "soothing syrup;" "Bateman's Drops;" somebody's "quick cure for colic," or some such-like remedy. All of them are sold warranted to contain no morphine or opium. The various consumption cures and cough remedies,

with high sounding titles—too many, with the certificate of some business man, lawyer or preacher appended, attesting their virtues—put upon the market at the present time and sold over the druggists' counter, are to blame for many a ruined member of society, cursed with the opium habit. This is not overstating the matter—rather understating it. Ninety-nine out of every hundred of these various preparations sold, contain opium in some form although they state upon their faces that they contain no "morphine." They may not contain simply morphine, but the foundation is some preparation of opium, and they sell because they stop the cough and make the "patient feel good." A dose of paregoric, laudanum, opium or morphine would do the same. Once having obtained relief, that patient advises some one else of the wonderful relief and benefit he, or she, obtained and the new victim tries it, and soon another fully-fledged opium habitué results.

Should a dose of such stuff be given to the offspring of a morphine-using mother, the smouldering fire at once begins to burn. The thing necessary to develop the habit has been given—the match has been applied to the rubbish pile, and it at once blazes up and burns with a flame that can not be subdued. Doctor Crothers, of Hartford, Conn., cites many cases in proof of this statement. One will answer my purpose. "To parents, both neurotic and probably opium users, a child was born. They died, leaving the child nervous and irritable. Morphine was accidentally given to quiet it, and from that time forward it became delirious without a daily dose of morphine. At five years of age, it died a confirmed morphine user." The literature of the day abounds in such cases. Was the physician to blame there? Nay, verily!

I have, in my own experience, met with a similar case where two sons, born to an opium-eating, morphine-using father, shortly after budding into a promising young manhood, began the use of whiskey and morphine, and soon became wrecks mentally, morally and physically; one dying not long since; the other being, in every sense of the term, a wreck. Though living, he is worse than dead.

Dr. Jules Rochard, in *Le Union Medicale*, draws a gloomy picture of the increase of the morphine habit in France and elsewhere. The habit, he finds, becomes incurable at the end of six months of indulgence. The fair sex and the doctors are, in his opinion, most deeply addicted to the use of morphine. Women seek less to hide the vice than do men. As a rule, men, and especially medical men, take the greatest pains to hide their vice—hence the number of those who use the drug cannot be correctly estimated.

In many cases parties have used the drug for years, without being suspected of such a habit. The current literature abounds in many such cases. A few years ago I was treating a medical friend in a case of pneumonia. I was much worried by the irregular effect obtained from the medicines administered, and, at the time, suspected that an opiate was being used, but could get no positive proof of the matter. A few days since, I learned beyond question, that my quondam patient was a confirmed morphine user. These are not exceptional instances. Numbers of just such cases, not only among medical men but also among the laity, are cited in Hare's *Practical Therapeutics*. This ability to conceal the habit is one of the distinctive points in the use of alcohol and opium.

A native Chinese preacher, in comparing the two vices, stated that he found this one striking difference between the effects of the opium vice among the countrymen, and those produced by alcoholic intemperance among Americans: "When the Chinese opium-smoker comes homes at night, he does not abuse his children and kick his wife; his wife kicks him."

The use of opium, in some of its forms, is in my opinion, on the increase, and whilst the medical profession cannot be blamed therefore, it should, however, be held to some extent responsible for the state of affairs, because, standing as we do or should, upon the watch-towers, we do not proclaim boldly to the families under our charge, the dangers lurking in the use of all such remedies. We do not make proper inquiries about the progress of our little ones, and keep the parent posted upon the various household remedies administered. Many deaths have been reported of children a few months old, from unknown causes, where a careful inquiry would show beyond cavil that they were cases of opium poisoning.

I need not pursue this branch of my

subject any further. Any one by a little investigation can establish the truth of it. The druggist sells the medicine, which he buys, for the money that is in it. He does not trouble himself about the composition of it. He reads the label, notes what it claims to cure, and when a human being calls for a remedy to meet a certain ailment, he recalls the fact that he has on his shelves a bottle warranted to cure just such a case. He takes it down, assures his victim of the efficacy of the mixture, and sells it to him, pocketing at the same time a handsome profit. The remedy may do more harm than good, yet the druggist is not responsible. He has the stuff for sale, and the man wanted it and got it.

This could be prevented: First, by allowing no patent or proprietary medicine to be sold over the counter, which does not show on its label its true and exact composition. Any falsification in such matter should be punishable by a heavy fine. Second, no one should be allowed to sell drugs who is not a qualified pharmacist. In other words the present pharmacy law should be improved and made to apply to the whole State.

Were these ideas carried out and enforced as laws, all "soothing syrups," "consumption cures," "microbe killers," and such like would show upon their face their exact composition; and the mother would know with what deadly stuff she was drenching her child; would realize how rapidly she was laying the foundation upon which, in time, would develop a fully-fledged opium-eater.

In the next place, the law regulating the sale of poisons should be rigidly enforced. It reads as follows:

Milliken and Vertrees' Code. Art. E., Sec. 5635. "Any person who sells or delivers any poisonous liquid or substance, in addition to having the word poison printed or written on the label as now required by law, shall note in a book kept by such person for that purpose, the name of the person to whom such poison was delivered, the date of delivery and the kind and amount of such poison so delivered, and shall keep such book open for public inspection."

Sec. 5636. "Any person violating the provisions of this article shall on conviction be fined not less than $20, nor more than $100. This article shall not apply to the prescriptions of regular practicing physicians."

Sec. 5637. "Any person, except a practicing physician in prescribing for a patient, who sells and delivers any tartar emetic, laudanum, morphine, or other drugs or medicines, without having the common name thereof written or printed on a label attached to vial, box, or parcel containing the same, shall, on conviction be punished as provided in the preceeding section."

Sec. 5638. "Any person who sells to any child under ten (10) years of age, any poisonous liquid or drug, without an order in writing from the parent, guardian, or other person having the legal care of such child, designating such drug either by its name or effect, shall, on conviction be punished as provided in Section 5636, and may also be imprisoned in the county jail not more than three months."

The provisions of the law are plain. Morphine, opium and laudanum are poisonous, and will kill with as much certainty as will strychnine, arsenic and such like poisons.

Not one druggist in one hundred complies with the law. No register is kept in which to note the sale of poisons. Any thing called for is sold, and no questions are asked, except, "where is the money?" When that is produced, the sale is completed and the drug is delivered. Often and over, a child of less than ten years of age, steps into a drug store with a fifty-cent piece and a small scrap of paper, inscribed with one word "morphine." No name is signed. No questions are asked. The bottle of morphine is wrapped up and passed to the child over the counter. A death may follow on the sale, but the morphine cannot be traced. No register is kept in which the sale is noted, and hence no proof exists that A. or B. sold the poison, and no prosecution follows. Druggists say that the amount of opiates sold is beyond the comprehension of the average doctor, even: that they sell it day by day without knowing or even inquiring for whom it is bought. Such should not be the case, but so long as any irresponsible party, or child of tender years can buy without let or hindrance, the awful traffic will grow.

If the laws were enforced to the letter, and the name of the purchaser of every grain or morphine entered in a public

ledger open to the inspection of friend or foe, where the buyer did not present the prescription of a reputable physician for the drug, a halt would promptly be called. Even a chronic opium-user would draw back and hesitate to allow the public to know the quantity of the drug he or she consumes, for it is an incontrovertible fact, that open and notorious morphine habitues will always minimize the amount of the drug used. Time and again, in answer to the question as to how much the individual used, have I been given a quantity of about one-third, or one-fourth of the amount that I knew was consumed. The opium-eater does not want the public to know how much he consumes. The habit is carried on in secret for years, till it bursts upon the public in some unexpected way.

The user of the drug will sacrifice money, place, position, honor, nay verily, in some cases even virtue itself, to obtain the vile stuff, and until some sacrifice of this kind is made upon the altar of appetite the habit remains concealed. It is a habit more seductive than alcohol, because, so to say, for a long time it can be kept as a private vice, whilst the habit of using alcoholic drinks cannot be kept long concealed. The odor upon the breath, the bloom upon the nose, the flushed face, the protruding abdomen, and many other signs soon proclaim the dram-drinker, whilst opium can long be indulged in without being generally known. The sleepy state as the drug wears off can be accounted for by a rest broken by watching a sick friend, or an undue nervousness from some cause.

The female sex does not often, in the country and small towns, become addicted to the use of alcohol, while opium claims more of them as its devotees than of the male sex. The latter attracts men and women; the former, as a rule, men only.

If the vicious habit, the use of opium in any of its forms, imposed a penalty only upon the person using, then the damage done would not be so great, but the unborn child suffers—the evil is entailed. The sins of the mother are visited upon the children of even the third and fourth generations. The child, through no fault of its own must suffer from the evil habits of one or both of its parents. This state of affairs should not be. The strong arm of the law, which looks closely after the monied interests of the child left an orphan, should be invoked to prevent a far worse condition than that of a moneyless orphanage. The child with no constitution at all, or with one leaning to vice and immorality, is a proper charge upon the State. If the State does not engage in prophylaxis, later on she will find that curative measures are both costly and, in many cases, without favorable results. Let, then, the physician do his part, and the laity do its part. Let both see that the existing laws are carried out to the letter; let them work together to get better laws enacted, and a great step will be taken in the fight against opium. Prevention is better, and more available in this instance than any other course.

As both a preventive and a curative measure, all chronic inebriates and opium-eaters should be committed to the insane asylums for treatment, and kept there until completely cured. No half-way measures should be taken in such cases. Laws should be passed broad enough in their scope to reach all such cases, and so drawn as to meet all objections that could possibly be urged upon the grounds of personal liberty. Opium users should to all intents and purposes, be treated as persons dangerous to the public, and not permitted to be at large.

The insane dodge is set up by them, when they violate the laws of our State, and this method of treatment simply would recognize the possibility of the existence of such a condition.

This paper has been written to air no pet theory of my own, but to invite the attention of the society to a great and growing evil.

1. Make our druggists obey the laws. Protect ourselves against them.

2. Let the patients know that if they will use the drug the unborn generation shall be protected, so far as it can be done, by putting the users where the drug cannot be gotten and the habit is broken.

A Sedative Cough Mixture in Phthisis.

Codeinæ sulph	gr. iij
Liq. atropiæ sulph.....	m xij
Liq. strychniæ	ʒ j
Syr. tolutani	ʒ iss
Infus. rosa acid. ad.....	ʒ vj

M. A tablespoonful in a wineglassful of water every four or six hours.

—*Med. Press and Circular.*

ANTISEPTICS IN OBSTETRIC PRACTICE.

G. B. GILLESPIE, M.D., COVINGTON, TENN.

One does not hear, now-a-days, of a lying-in hospital being closed on account of an outbreak of puerperal fever; even the old "milk fever" is banished from the lying-in chamber, and the puerperium must be afebrile.

The Preston Retreat in Philadelphia, shows a record of over thirteen hundred deliveries without a death, and ante-partum and post-partum doucheing of patients, with full antisepsis on part of doctor and nurse, is practiced there. Philadelphia has reason to feel proud of this institution's statistics, which leads the world; yet other maternity hospitals can show almost equally good results.

These institutions are built for the sole purpose, and are fitted up with the latest devices in the way of sanitary plumbing, etc., for the guarding from harm of those who are compelled, in time of need, to take refuge within their walls.

If antisepsis is needed in such places, how much more is it needed in the homes of the rich, where it is so usual to find a water-closet immediately adjoining the bed-chamber, or a wash-basin connected with the sewer in the room. The poor, while they may not possess these questionable luxuries of the rich, yet are equally exposed. How often is a bucket filled with filth found standing just outside the door of the room.

Great numbers of cases of puerperal peritonitis are caused by the carelessness of the accoucheur in handling the puerperal woman; and with unclean hands, or with imperfectly cleansed instruments, you will realize how easy it is to carry the disease from one patient to another. Cleanliness is the best disinfectant. Parturition is a physiological process, but in a certain sense, it is likewise a surgical case in which the vagina is full of minute abrasions, if not torn in places, and affords numerous receptacles for the introduction of septic material. The surgeon does not leave unprotected any avenue by which infection may reach his patient. Why should the obstetrician?

On being called to a parturient woman, I first order an enema to clear the bowels of all accumulation of fecal matter within the rectum; then have her washed about the genitals with warm water and soap, and dried with a clean towel. Afterward I use an antiseptic douche. I prefer carbolic acid or creoline. The hands should be thoroughly washed with hot water and soap. I generally use Johnson's Etherial Antiseptic Soap, scrubbing with a nail brush, drying my hands on a clean towel, and dipping them in a 2 per cent. solution of creoline before making a vaginal examination.

I make as few examinations as possible, but enough to render such assistance as might be necessary. I never allow a nurse to examine a patient after I take charge. If I have to use instruments, I take the same precautions in rendering them thoroughly aseptic as in any other surgical case. As soon as the child is delivered I apply an antiseptic pad, made of borated cotton, over the vulva, and as soon as practicable proceed to deliver the placenta—usually in five or ten minutes—exercising special care to remove all the membranes, not by twisting, as some recommend, as it often tears them in two, but by very gentle traction so as not to break them. If the delivery is a natural one, I dispense with the post-partum douche, unless there is special indication for its use. I then have the parts washed with clean warm water, which has been previously boiled, if I can get it; dry with a clean towel or cloth; apply the antiseptic pad; remove the slip-sheet and put a clean one on the bed over the oil-cloth, which should be a new one; and have the patients' clothes changed if soiled at all.

On the first appearance of any offensive discharge, I use an antiseptic douche of two per cent. carbolic solution twice a day. If it is an unusually hard or instrumental delivery, I use on the completion of labor, an intra-uterine douche of sterilized warm water; but if I am not satisfied as to the cleanliness of the water, I use a 1:4000 bichloride solution being particular to have my syringe thoroughly aseptic. If there

is a lacerated perineum, it is duly repaired. If involution does not occur at the proper time, or should there be hemorrhage, I at once curette and pack the uterine cavity with iodoform gauze, removing it the next day and re-packing if necessary; but seldom find it necessary.

When this antiseptic method is strictly carried out, we are never annoyed by seeing our patients suffering with any of the septic fevers of the puerperal state.

"Dirty and careless midwifery is, to-day, a too fruitful source of pelvic disease."

HYGIENE OF CIRCUMCISION.

W. FRANK GLENN, M.D., NASHVILLE, TENN.

When Moses, in great wisdom, was given out laws and rules for the government of the chosen people of God, every edict was considered as applying solely to their future existence. In other words, for the benefit of their souls. Everything seemed to have purely a religious meaning without any reference to their earthly existence whatever.

But if we will read his various addresses to the Israelites, we will find not only laws for the good of the soul in its eternal existence, but a magnificent code to govern intercourse with each other while on this earth; an almost, if not a perfect set of rules to be observed solely for the benefit of their physical organization. Moses, the great and wise law-giver of Israel, therefore divided his laws into three distinct sets: First, those which pertain to the salvation of the soul; second, those which would insure a pleasant and happy relationship with each other; third, realizing that there could be no spiritual comfort nor any happy domestic relations without physical health, he gave them a code of hygiene, the observance of which would preserve their bodies in the highest state of physical perfection.

An example of the first is the following:

"Thou shalt have no other gods before me."

An example of the second is:

"Thou shalt love thy neighbor as thyself."

An example of the third is:

"And on the eighth day the infant shall be circumcised."

When the circumcision of every male child on the eighth day after birth was made a religious duty, it was, in my opinion, void of any real religious meaning, but was executed solely for their benefit as a physical race. Had not the religious penalty been attached its observance, it would not have been so scrupulously carried out. Had Moses simply said that every male child should be circumcised, because it would tend to prevent in future years, certain habits and diseases which would impair the mind and body, render them weaker men and slowly but surely weaken them as a race, little attention would have been paid to it. But when the law came as a command from God to his chosen people, attaching thereto a reward in eternity, it was then, as it is to-day, strictly observed by Jews. Whether as a religious rite it serves, or did serve, any purpose to the future happiness of the soul, it is not my province here to discuss; but that it is one of the grandest hygienic measures suggested to man, I most fully believe.

Now, following the subject directly, we ask: In what way does the simple act of removing the foreskin prevent disease and preserve the health of man?

In answer to this important question, I first make this assertion, which I do not believe can be successfully disputed. There are two things in the world which do more harm to the human race, physically and mentally, than all things else with which we have to contend. These are masturbation and syphilis.

When we stop and consider how many physical disorders, as well as mental derangements, are dependent directly and indirectly upon one or both of these causes; and again, how their influence tends with each succeeding generation, to deteriorate the human family, we are simply appalled. As the blood-vessels permeate and ramify

through every tissue in the body, so the pernicious influence of these disorders pervade, to a greater or less degree, the entire human family. Then, under the idea that prevention is better than cure, anything that would wholly or even partially stop the evil effects of masturbation and largely lessen the spread of syphilis, would be of untold benefit to individuals, as well as a public good to mankind.

Just such a good the simple act of circumcision accomplishes, and I hereby submit what I consider positive proof. About one year since, I had a stereotyped letter forwarded to the leading Genito-Urinary specialists of the United States. The letter read as follows:

"Dear Doctor:

What proportion of Jews to Gentiles have you been called upon to treat for the evil effects of masturbation; also what proportion of Jews to Gentiles have you treated for syphilis?"

This letter was mailed to the following gentlemen: Chas. F. Bovan, Baltimore, Md.; Samuel Alexander, New York City; Hunter McGuire, Richmond, Va.; J. William white, Philadelphia, Pa.; A. T. Cabot, Boston, Mass.; G. C. Greenway, Hot Springs, Ark.; H. H. Mudd, St. Louis, Mo.; Prince A. Morrow, New York City; F. H. Watson, Boston, Mass.; E. C. Burnett, St. Louis, Mo.; J. Nevens Hyde, Chicago, Ill.; N. Senn, Chicago, Ill.; A. S. Garnett, Hot Springs, Ark.; R. W. Taylor, New York City; L. Bolton, Bangs, New York City; W. K. Otis, New York City; C. H. Masten, Mobile, Ala.; J. W. Brinton, Philadelphia, Pa.; Edward H. Martin, Philadelphia, Pa.

Here are some results from the answers:

Syphilis equal in both, 2; no record retained, 8; a marked difference, 9.

Now, as will be seen from the above answers, not a single one has been called upon to treat an Israelite for an extreme evil resulting from masturbation, which proves conclusively that boys circumcised before the age of puberty do not masturbate excessively. The reason for this is plain. When the foreskin is removed, the epithelial layer of the glans penis becomes thickened and dry and is therefore not so sensitive, while with a long prepuce, the glans is kept constantly moist, soft, and, on account of accumulated decomposing secretion under the foreskin, is more or less irritated and congested. This condition of the glans penis at and after the age of puberty, would undoubtedly have a tendency to exaggerate the natural sexual desire and one prone to seek pleasant relief in the most convenient way. Having a long foreskin with which the necessary titillation can easily be made, self-abuse is a very natural consequence. The condition, therefore, of a glans penis in a boy with a foreskin, at and after puberty, is as follows: A thin epithelium, kept constantly moist, covered by thick, flaccid skin. On account of this foreskin having confined underneath it a constantly decomposing secretion, a congested and hyperaesthetic condition exists. This physical condition, coupled with the usual ignorance of boys on the subject of masturbation renders it a very natural temptation.

Now when the prepuce has been absent since infancy, what is the condition? There being no prepuce to lubricate, the secretion ceases; by years of friction with the clothing the epithelium of the glans penis becomes very much thickened. Being, therefore, thick and dry, there is not unnatural sensitiveness. If masturbation is indulged in, there is no foreskin to use and the friction of the naked hand frequently abrades the glans penis and causes soreness and pain. The records show that circumcised boys do not masturbate excessively, while uncircumcised boys often do.

The glans penis of a circumcised person is almost, if not entirely non-absorptive when it is unabraded. But the glans penis of an uncircumcised person is a very good absorptive. When such a person comes in contact with syphilitic poison, it is very apt to be absorbed and innoculate the system, whether there is any abrasion or not. In a glans penis, however, that is dry and has a thick epithelium, with no abrasion, it is almost wholly non-absorptive and there is little if any danger of contracting syphilis, even if contact is made.

Now, as the simple act of circumcision almost wholly prevents the many evil results following excessive masturbation and largely decreases the number of cases of syphilis, it presents itself as a most important hygienic measure. We, as medical men, should urge its performance on every male child very soon after birth.

Irritation, inflammation or contraction of the prepuce in children, frequently causes severe reflex troubles, such as irritation of the bladder neck, extreme irritability, nervousness, convulsions and has been claimed to be a potent cause of hip-joint disease. The many misfortunes that may befall a person with a long and useless foreskin, appeal to us as medical men interested in the preservation of the health of mankind and the prevention of disease, to urge early circumcision in every male child without exception.

If we would improve our race of men both physically and mentally, we should educate the youth of the land thoroughly in sexual hygiene. We should teach the boys that they should not have an emission from any cause before the age of twenty-one, not only from a moral standpoint, but, mainly, for their own health and happiness in future manhood. There is no good sense or reason in granting a male liberty to masturbate, have intercourse *ad libitum*, have gonorrhœa frequently and syphilis, without tarnishing his respectability or his eligibility for marriage, while the young lady he asks to be his partner for life is to be as "chaste as the icicles covered by frosts of purest snow, that hangs Diana's temple."

While such has been, and is still, the custom of society, custom does not make a wrong right, and we, as guardians of the health of the people, should begin the reformation.

We should teach fathers (that they may teach their sons), the dangers of masturbation, of gonorrhœa and of syphilis, and urge them as earnestly to avoid these evils as they are enjoined to shun the gambling hell or the drinking saloon. If every father would have all his boy babies circumcised, then, as they approached the age of puberty, explain fully to each the dangers of masturbation, gonorrhœa and syphilis; educate them to make passion their slave and not be passion's slave, before long we would realize that man is only "a little lower than the angels."

COMMUNICATIONS.

FAT IN PULMONARY CONSUMPTION.

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Fat is one of the most important, though one of the most unstable constituents of the human body. It gives weight, rounds off the angular outlines, and protects against cold and injuries. Normally it fluctuates with the cycle of the seasons, diminishes rapidly in disease, and speedily returns during convalescence. Its diminution marks one of the earliest symptoms of pulmonary consumption, hence the index which is afforded by the weighing scale forms an element of precision in the diagnosis and prognosis of this disease.

What is the source of fat in the animal economy? Is it derived from the outside as fat, or is it manufactured by the body from other food? These are questions of great physiological and clinical significance in relation to the disease under consideration. There are two great classes of foods: the proteids, or albuminoids; and the fatty and starchy foods, and there was a time when the animal body was likened to a steam engine, inasmuch as it was believed that the proteids furnished the material for the structure of the machine, while the fats and starches were oxidized and gave the necessary force to keep the machine in motion. According to this view the fat of the body is derived from the fatty and starchy foods, and is used at once, or stored up for future purposes. This view is not strictly true, as will appear further on.

The fat of the body is contained in

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cells which are composed of protoplasm and possess nuclei. The cells abound in the interstices of loose, connective tissue, and are found under the skin, especially in the soles of the feet, the palms of the hands, buttocks, female mammary gland, around the synovial capsules of the joints, in the orbits, in the medullary canals of bones, in the surroundings of the kidneys and the omentum, and on the surface of the heart.

When an animal fattens it appears that oil globules are formed within the fat-cells. These globules increase in number while the protoplasm of the cell diminishes. These globules are not deposited in the cells in a mere mechanical manner, but they are formed by the cell itself and at the expense of its own protoplasm, which becomes very much attentuated. It seems, therefore, that the fat of the body is as much a secretion of the fat-cells as pepsin is a secretion of the peptic glands, or as the oily matter of the skin is the secretion of the sebaceous glands, or as the fat of milk is the product of the cells of mammary gland.

From the fact that the protoplasm of the fat-cells undergoes metamorphosis when the oil globules form, it seems quite obvious that other than fatty food is used by the body in the manufacture of fat, and that in all probability proteid or albuminous food is used for this purpose. It was shown by Liebig long ago that fatty, starchy, and saccharine foods do not form the exclusive supply of fat in the body; for the butter in the milk of a cow far exceeds the scanty supply of fat in her food, and the wax which is produced by bees is out of all proportion to the amount of sugar which they consume in their food. The feeding experiments of Lawes and Gilbert also demonstrate "that for every 100 parts of fat in the food of fattened pigs, 472 parts were stored up as fat," showing, therefore, that fatty foods only supply about one-fourth of the fat which is contained in the body.

That proteids form on important source of fat in the body is evidenced by the following facts: Microscopic observation shows that the fat of milk is formed by the epithelial cells of the mammary gland through the probable metabolism of protoplasm. Fat in milk is largely increased by albuminous, and diminished by fatty foods. When cheese "ripens" its proteids are converted into fat. Milk sugar is maintained is abundance in the milk of carnivora even when fed on an exclusive meat diet (Foster). Fatty degeneration, as is often witnessed in the heart and in other important organs, is further evidence that proteid substances are converted into fat.

By this I do not wish to convey the idea that albuminous foods supply the greatest part of the fat to the body; nay, we know that this is done by the carbohydrates; but I desire to lay special emphasis on the fact that fats and oils do not play the important part which they are popularly supposed to do in the nutrition of the animal body, and on the further fact that proteids are of greater value as fat producers in pulmonary consumption than they are generally believed to be. In fact, evidence is not wanting to show, as has already been hinted at, that both fats and carbo-hydrates diminish the metabolism of the body, while a meat diet enhances the same, increases the oxidizing activity of the body, multiplies the number of red blood-corpuscles, and leads to a rapid consumption of fatty and carbo-hydrate food. A great deal of harm has followed the doctrine that the fat of the body only comes from the fat of the food, and that therefore the only way to fatten a consumptive is to ply him with fats and oils of various description. Every experienced physician knows that oil and fats produce dyspepsia in many such patients, and do no good in some with whose digestion they seem to agree, while there are a few who thrive under their use, but whose fat does not seem to have any staying qualities. It seems to me that oily and fatty foods only confer a real benefit on a minority of consumptive sufferers, and that much greater service is rendered to the nutrition of such patients by the administration of albuminous foods, the important ones among which are freshly expressed beef juice, beef, mutton, lamb, milk, eggs, oysters, clams, liquid peptonoids, beef powder, meat juice, beef peptones, etc.

An important question comes up here in regard to the influence which rest and exercise have on the fattening process of the human body. Is physical activity more conducive to fat-building than rest, or is it not? This may be said to depend altogether on circumstances. There is no

doubt that in health exercise gives both fat and strength, but it is quite different with the invalid. The fat which is stored up in health represents so much surplus capital which is laid up for a rainy day; but the consumptive has no surplus and lives, as it were, from hand to mouth. All his energies are devoted to the maintenance of those bodily functions which are immediately necessary to life, such as circulation, respiration, digestion, innervation, etc., and very frequently these are carried on imperfectly. To him, therefore, exercise is meaningless, for he has no capital to exercise until he gets stronger and lays up some. Hence he must practice economy. He must restrict his outgo and increase his income. This he can only do by resting.

That rest promotes the collection of fat is shown in the fattening of animals. Swine and cattle, which are prepared for the butcher's knife, are not allowed to run loose, but are closely confined; and the geese of Strassburg, which fatten to enormous proportions in a few weeks, are shut up in tight boxes with just sufficient room to project their necks. I have, again and again, observed that with no other change in the treatment except the substitution of rest for exercise, consumptives show a marked and distinctive improvement and gain in flesh.

It is also of great interest in this connection to consider the influence of the nervous system on nutrition; although, owing to the limited time at my disposal, I can only briefly refer to this subject. Whether there are special trophic nerve fibres or not, it is quite clear from the large number of experiments which have been performed, that the nutrition of that part of the body suffers whose supplying nerve is divided or injured. Clinical evidence points out the same. It is well-known that in neuralgia, the limb, or area of tissue to which the affected nerve is distributed, emaciates and loses its fat. Clouston states (*Mental Diseases*, p. 469) that thinness is the almost constant accompaniment of melancholia, and that fattening of the patient is its natural cure; and he furthermore says, that this depraved or weakened trophic energy speedily tends to end in phthisis pulmonalis. In fact, he believes that melancholia has a special proneness to terminate in pulmonary consumption. Phthisis and melancholia run a parallel course in this respect. Emaciation is their common enemy, while fat redeems both, and, according to Clouston, the latter is convertible into the former disease. Are we not able to discern in this a confirmation of the view that a causative relation exists between disease of the nervous system and disorder of nutrition? Is it not probable from this that the building of fat is intimately dependent on the integrity of the nervous system? This probability is strongly confirmed by the therapeutic action of strychnine. It is well known that this agent has no other influence except that which it exerts on the nervous system, and yet I know of no other single drug under the administration of which consumptives fatten more promptly than under strychnine when it is given in gradually increased doses, and combined with suitable rest and nutritious food, as is attested by the following list of cases abstracted from my note-books, which includes those adult patients who have shown the greatest disposition to gain in flesh during the last three years.

(1) N. Second stage; gained ten pounds. Still under treatment.

(2) P. First stage; gained fifteen pounds. Recovered.

(3) W. Third stage; gained twelve pounds. Disease arrested. Is at work.

(4) R. First stage; gained ten pounds. Disease arrested.

(5) O. Second stage; gained sixteen pounds. Disease arrested.

(6) K. First stage; gained twenty-two pounds. Recovered.

(7) S. Second stage; gained twenty-eight pounds. Disease arrested. Is at work.

(8) S. First stage; gained eighteen pounds. Recovered.

(9) E. Female. Third stage; gained twenty-seven pounds. Recovered. Gave birth to a baby a year ago. Remains well.

(10) N. Female. Third stage; gained thirteen pounds. Recovered. Gave birth to a baby a year ago, and expects another in four months. Is doing very well.

(11) J. Disease complicated with empyema. Drainage. Recovered. Gained seventy-three pounds. Is at work.

(12) S. First stage; gained sixteen pounds, Recovered. Is at work.
(13) T. First stage; gained forty-four pounds. Recovered. Is at work.
(14) B. Third stage; gained forty-six pounds. Recovered. Is at work.

While it is true that increase of flesh is always desirable in the treatment of pulmonary consumption, it is a mistake to hold that every patient of this kind must make prodigious gain before recovery can set in.

On the whole I believe that women are less inclined to gain than men, and I have known members of the former sex make an uninterrupted recovery without increasing in weight.

In summing up the principal points in this paper it appears that the fat of the body is manufactured out of carbo-hydrates, proteids, and fats; that for fattening purposes, proteids and carbo-hydrates are superior to fats and oils; that the latter are overrated in the treatment of pulmonary consumption; that carbo-hydrates and fats hinder and proteid foods accelerate metabolism; that rest of the invalid promotes the formation of fat, and that exercise retards it; that in all probability the production of fat in the body is largely under the control of the nervous system; and that strychnine through its stimulant action on the nervous system fattens the consumptive, and increases the number of his blood-corpuscles.

CORRESPONDENCE.

THE SKUNK AS A SOURCE OF RABIES.

EDITOR MEDICAL AND SURGICAL REPORTER:

In the abstract printed in THE REPORTER for April 13, under the above title, the writer says: "And as a final wind up, what is all this pother about? There is not a particle of evidence that the skunk's bite is particularly dangerous."

Is it not possible that the writer may be mistaken? He does not claim that he has ever seen a dog or anything else bitten by a skunk. Nor have I ever seen a dog die from skunk-bite. His evidence, like mine, is all hearsay. He says the belief extends from Texas to Kansas. It also extends through the border States of the United States and Mexico to the Pacific ocean. Every widely extended belief or superstition, is now, or has been in the past, founded on a more or less extensive basis of facts. As the belief travels in time and space, it often gets so loaded with accretions and additions that it is not possible to learn the facts on which it is founded unless it can be traced to its place of origin.

One day a favorite dog of Rancher F—— came up from an encounter with a skunk, with a small scratch on the lip, just sufficient to draw a few drops of blood. An old beekeeper, Mr. O.——, advised that the dog be killed and thus saved suffering, as it was sure to die in a few days. Rancher F—— ridiculed the idea of danger, and declared that in Nova Scotia he had seen more than a dozen dogs bitten by skunks, and their bite was no more dangerous than that of any other animal. The old beekeeper replied that Nova Scotia was a long way off and it might be so there, but he knew that in California the bitten dog always died. I did not stay on the ranch to watch the dog, but when Mr. F—— next came to town, he told me that the dog drank water eagerly but refused food, and died in a few days.

Inquiry among the native Spanish Californians disclosed the fact that the belief in its fatality was quite general. Extending the inquiry among Americans, long resident here, I found some believed it just as fatal as the bite of a rabid dog; others acknowledged it to be dangerous, but thought recovery the rule. To the question why the skunk's bite was fatal to the dog in California and harmless in other places, I got no more satisfactory answer than that given by the old beekeeper, "It was so, because he knew it was so." I began to despair of getting a better solution of the problem, and shelved it for some years.

I had never heard of the belief until I

came to Southern California, and at the outset dismissed the idea of rabies, for only two California dogs were ever attacked by rabies; one in a story printed in Boston, and the other in a tale printed in New York.

One day when putting up some dog medicine for an old stock raiser, who kept a dozen or more dogs, I asked if he ever had lost dogs from skunk bite? "Yes!" "Have any survived a decided bite?" "Yes, one!"

He said that starting one morning to hunt down a California lion that had killed a colt the night before, a two-year-old dog got away from the pack and was bitten by a skunk. He immediately started at full speed for the branch, one-quarter of a mile away, but was overcome by nausea; stopped to vomit; turned round two or three times to get his bearings; was again compelled to stop and vomit; turned round as before, and made another dash, and this was repeated three or four times until, finally, reaching the water he plunged in, leaving only his head uncovered. As the rest of the pack was not contaminated, he concluded to go after his lion, and when he came home shoot the dog to prevent his further suffering. But the lion led him a long chase and it was late in the night when he got back. Next morning the dog was not to be found. A day or two afterward he sneaked up to the feeding ground, but ate nothing; whether from nausea or because he was ashamed of his vile odor, Mr. S—— could not tell. He soon went back to the water and Mr. S—— carried him some food, but could not induce him to leave the water. He left the food for him on the bank for several days, and when Major considered himself sufficiently purified, he came up with the pack as usual. He lived to a good old age, but could never again be induced to approach a skunk, nor long remain where their odor was at all pronounced.

In answer to inquiries, Mr. S—— said, the dog that survived was bitten in the rainy season, while the dogs that died were bitten in the dry season. Have we not here a clue to the solution of the problem. In those places where the bite is harmless, clear, cool, running water is never far to seek; while in that belt where it is believed to be dangerous, water is comparatively scarce. For nine months of the year, streams of running water are small, few and far apart. This is the only solution of the problem I have, and when any one offers a better, I shall be ready to trade or give mine away.

Very truly,
F. R. MILLARD, M.D.,
San Diego, Cal.

NAPOLEON'S FAVORITE PRESCRIPTIONS.

EDITOR MEDICAL AND SURGICAL REPORTER.

Before the present era of Napoleona dies out the two following favorite prescriptfons of Napoleon I. may be of interest to some of the readers of THE REPORTER;

Napoleon's pectoral pill.

Pulv. ipecac..... gr. xxx.
Pulv. scillæ..... } ää gr. xl.
Pulv. ammoniæ..... }

M. ft. et. div. in pil. No. xxxiv.

Sig. Dose, 2 pills night and morning.

The above formula was a favorite remedy with Napoleon for difficulty of breathing, bronchitis, and various affections of the organs of respiration.

Napoleon's remedy for the immediate relief of hoarseness:

Liquor. ammoniæ fortioris ..... m x.
Syrupi erysemi..... ʒ iss.
Infusionis tiliæ florum..... ʒ iiss.

M. Sig. To be taken at one dose.

This formula was, doubtless, an excellent remedy for hoarseness, and could be used even now with some advantage. But as the syrup. Erysemi and the infusion of linden flowers would be rather difficult to procure at the present day, the following formula may answer as a good substitute:

Liquor ammoniæ fortioris..... m x.
Syrup acaciæ ..... ʒ iss.
Aquæ aurantii flor..... ʒ iiss.

M. Sig. To be taken at one dose.

Yours very truly,
CHAS. B. WILLIAMS.
1226 Spruce St., Phil.

DIPHTHERIA.

EDITOR MEDICAL AND SURGICAL REPORTER:

I am sick and tired of hearing such unfavorable reports on the treatment of diphtheria. I do not claim to have had many hundreds or thousands of cases of diptheria within a limited period, but I do deprecate the rigid formality of treatment that is adopted by eminent men in the profession.

My attention has been called to this subject by the lugubrious introduction of Dr. Hiram Corson's article in the last number of MEDICAL AND SURGICAL REPORTER. Dr. Corson is a man of superior intellect and of long experience in the profession, and although I have no pretentions to an extensive clientele or experience, I, like every one else, have my own individual opinions.

Physicians in our day are much too apt to treat their patients by a routine course, regardless of individual symptoms. I wish to state here that I do not have that confidence in the coal-tar products as antiseptic remedies that many of my confreres have.

When we come to discuss the physiological differentia of the individual cases, then of course the treatment must necessarily be modified. Diphtheria is a highly contagious, infectious disease, characterized by a great tendency to malignancy and extension if proper antiseptic measures are not adopted *imprimis*. The period of incubation is surprisingly short, and varies between a few hours and seven or eight days, according to the physiological condition of the subject.

Another point to be taken into consideration is that the violence of *pro tempore* symptoms does not always accord with the severity of the case.

My views on this subject, offered in all humility, are that the initial treatment is always carried out too much on the expectant plan—waiting for more serious symptoms to develop themselves. The main object in the treatment of this disease is to destroy the pyogenic matrix and thereby avoid its extension. My plan is to use nitrate of silver in solution with an atomizer three, four or five times a day, to this effect, and afterward moderately strong gargles of carbolic acid and water. The strength of the nitrate of silver solution to be used with the atomizer is twenty grains to the ounce. As supportive treatment iron tonics, strong beef essences and anodynes *pro re nata*. The systemic treatment, of course, must be varied according to the constitution, hereditary predisposition, etc., of each individual patient.

I respectfully invite a further discussion of this subject. Let us see if we cannot strip this one disease of some of its post-mortem terrors.

Respectfully yours,
Thompson, Pa. A. W. STIMPSON, M.D.

AN OPEN QUESTION.

EDITOR MEDICAL AND SURGICAL REPORTER:

On Sunday evening March 24, at 7 o'clock, the bartender at Burns' saloon shot Thomas Doran in the left thigh. The ball cut the external saphenous vein clear apart, passed through the ramus of the pelvic bone, toward the outside; curved round the hip-joint without injuring it, and lodged in the tissues at the posterior portion of neck of femur.

Two surgeons of this city were summoned at once. Hemorrhage had been copious, but when they arrived it had ceased.

No blood vessels were tied. The man rallied from the shock and gained strength. Friday, March 29, the surgeons were examining the wound, when recurrent hemorrhage came on. The wound was enlarged and the lower end of the cut vein was ligated. *The femoral artery was also ligated.* Patient died two hours later.

I was present at the autopsy; Dr. E. P. Townsend handled the knife. He extended the incision in the thigh one inch upward, through Poupart's ligament, and without opening the abdomen came across the open mouth (upper end) of the cut vein. It was large enough to admit the end of the little finger.

At the coroner's inquest I testified that the upper end of vein should have been ligated at all hazards. Further, that to have ligated it, under the circumstances, would not have increased the shock; that the tying of the uninjured femoral artery was mighty poor surgery; would cause the death of the leg, and, of course, death of the patient.

Would it be right to hang the bartender in the case? JAMES E. FREE, M.D.

Billings, Mont.

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SATURDAY, MAY 25, 1895.

EDITORIAL.

THE SLAUGHTER OF THE INNOCENTS.

Utterly unpremeditated but fully anticipated and awaited with dread, is the appalling sacrifice of infant life which annually, during the hot season, occurs from causes which ought to be and are preventable.

Man is prone to boast that through the development of his own powers he has risen superior to those governing factors which, under natural conditions, inexorably control existence in all forms of life. To some extent this may be true, but Nature has a way of maintaining her laws whether by the use of conditions of her own establishment or by taking advantage of the artificial conditions introduced by man. If in the process of his higher development, man has succeeded in modifying the influence of environment, in making of none effect the principle of natural selection, or in entirely abrogating the law of survival of the fittest, as these obtain under Nature, his successes have been more apparent than real, for he has merely substituted for the natural, artificial conditions which are equally effective for the operation of Nature.

There is a well recognized causal relation between hot weather and infant mortality. In the temperate zones this is so well understood that it has passed into a proverb, and the supposititious danger of the "second summer" is dreaded alike by the intelligent and the ignorant.

Aside from the ills which infant flesh is naturally heir to, much of the awful mortality is due to artificial conditions which could be eliminated simply by the exercise of common sense. These conditions must be regarded as predisposing causes, and the most common as well as the potent are *irrational care, improper feeding* and that irrepressible pestilence that stalketh at all hours—the purveyor of free medical advice. Volumes might be written concerning these advance agents of Death, but attention is now directed to a few only of their many manifestations. So trivial do some of these

matters appear at first, and indeed not within the province of medical practice, that it would seem a work of supererogation to call attention to them were it not that the most casual observer must be impressed with the constant and universal prevalence of these little things which together become so massive. If by exercising its influence, the medical profession can, for prophylactic use, develop among the caretakers of childhood a little common sense, less cerebral energy need be expended devising futile novelties for remedial application.

It is affirmed that of all living animals the infant man is the most helpless and dependent. This is true, but the mere fact that the human infant can survive so much of the carefulness inflicted upon him in his helplessness, shows him possessed of considerable tenacity of life.

The average caretaker of infancy seems to be governed by three ideas which are as unalterable as were the laws of the Medes and Persians. Baby must never be cold; never be hungry; never cry; anything to prevent that.

As an instance of irrational care, notice the clothing of the average infant during hot weather. With the thermometer ranging in the nineties, and the humidity registering near saturation, while adult humanity swelters in seersucker and gauze, drinks freely of iced-water and seeks comfort in a cooling breeze, observe the unhappy condition of the baby whose natural dependence subjects him to artificial caretaking.

Despite every precaution the infant is showing signs of failing health; is very wakeful and restless; will take little or no food, although offered it every time it cries; is fretful and cries constantly; wants to be taken up, and while held will be quiet and go to sleep, but if laid down will speedily wake and cry; seems flushed and feverish; there is an eruption apparent, etc., etc. The caretakers are at their wits' end. They have tried every means known to their ancestors, their friends who dispense free advice, or to themselves, and in despair they send for the physician.

Now if the medical man has the courage, he may give the caretaker a realizing sense of the baby's trouble and at the same time enlighten the understanding as to the simplicity of the remedy—and all without giving a drug to the care-worn infant. The caretaker, clad in the original mode of Eden, must be garmented as follows: A bed-quilt folded, in a similar shape and used for a similar purpose, must be applied in a manner similar to the infant's diaper, the safety-pin need not be securely locked. A strip of flannel, eighteen inches wide and thirty-six inches long, is applied about the abdomen and fastened as is the infant's binder. A long-sleeved woolen undershirt is necessary to protect the upper part of the body. In lieu of fancy socks, old-fashioned knitted woolen stockings may be worn. The next stratum consists of a flannel underskirt of such length that it may be folded back over the feet so far as the hips. If the caretaker has never neglected duty, a thin layer of muslin underskirt, a foot or two longer than the flannel, may be added. Over all, a daintily embroidered slip, in length just twice the height of the wearer. All garments must be fastened with safety-pins, so bent as to easily unlock and permit of excursions of the points.

The caretaker must now be placed, on the back, in the middle of a feather-bed, covered with a blanket and every current of air shut off lest cold be taken. All signs of distress must be relieved by administering lukewarm soup.

The caretaker thus relatively put in the place of the care-sufferer, marvelously speedy would be the solution of the problem of the baby's illness, and the proper mode

of treatment would be a revelation inspired of common sense.

By a single experience of this kind the caretaker would discover: That an infant learns to feel long before it acquires fluency in expressing its opinions. That an infant's physical well-being is not conserved by maceration in its own juices. That thirst is not relieved by the administration of solid foods. That the free exercise of the muscles necessary for the development, and unimpeded circulation, respiration, etc., are not best obtained by swathing the body in tight, hot garments. And that relief for the infants, as for the adult, can best be obtained by exercising the same common-sense in both cases.

Numerous other instances of irrational caretaking will occur to the mind without further mention.

Improper feeding, perhaps more than any other ordinary cause, is responsible for infant mortality. This matter is so generally discussed that it is merely mentioned here.

As for the vendor of medical opinions and cures for all ailments, it is rather difficult to draw the line of exclusion distinctly, for this pestilential affliction assumes all forms, from the impertinent neighbor who boasts as a certificate of proficiency the fact that, "she has had eight children of her own and buried them all without calling in a doctor once," to the importunate relative who would cheerfully sacrifice herself if it would benefit the baby.

One physician obtained some success in forestalling this agency of death and disaster by instructing each prospective mother under his personal care, to procure some practical guide book in the care of children—such as Dr. Starr's Hygiene of the Nursery; to refer all questions of doubt to the decision of such guide; where unanswered, or where the answer was not fully understood, to refer the question to the physician; but under any and all circumstances to absolutely interdict any interferance from other sources, especially rejecting voluntary advice.

He found that this course, while it did not always win him golden opinions from the advisers thus interdicted, invariably proved of benefit to both mother and child, and he has had every reason to felicitate himself upon the advantages gained, and to rejoice in the cordial thanks of his grateful patients.

The plan is worth trying.

ABSTRACTS.

CONCLUSIONS CONCERNING THE KEELEY METHOD WITH DRUNKARDS.

The *Christian Advocate*, May 9, 1895, contains the following editorial:

This article consists of various facts, opinions, and reasonings, in part the result of previous investigations, but chiefly accumulated from correspondence, reading and conversations during the last two years, since our attention was specifically directed to this subject. To save space, promote clearness, and prevent misunderstanding each section will be complete in itself.

In the Appendix last week, to gratify the reasonable curiosity of the reader, we published statistics sent us by non-subscribers on printed postal cards, which were excluded from the table because contrary to the conditions deemed necessary to secure reliable information.

We had received statistics from eminent physicians, allopathic and homeopathic, with a national reputation either as superintendents of hospitals for the insane or as specialists in nervous diseases—none of

them in charge of institutions devoted to inebriety or in any way connected with them; but as none of the writers were subscribers to *The Christian Advocate* they did not come within the proposition. Their letters are important, and for this reason are herewith printed.

The first is from the superintendent of a large State Hospital for the insane:

"We have had five cases admitted to our care that had been treated at the Keeley Institutes. All of these were predisposed to insanity, had been in other institutions, had pursued various courses of treatment for this habit, and were demented by prolonged use of alcoholic liquors to such an extent that their judgment and will power were permanently enfeebled. None have been admitted in which the Keeley treatment was the exciting cause of insanity. After an observation extending over a period of eighteen years, we have come to believe that no treatment for drunkenness is of much value, or any value, where the patient's mind has become demented to the extent that judgment, will power, and self-respect have been lost. Unless the patient is anxious and willing to help himself by avoiding associations in which it is next to impossible to resist drinking, and has will power enough to carry out this line of conduct, he will be subject to frequent relapses."

The second letter is from the superintendent of one of the largest and finest private asylums on this continent, who had an extended general practice in one of the chief cities in the country before becoming connected with the institution:

"Before taking charge of this institution I knew of thirteen persons who had been at one time or another under my care, cases of the excessive use of intoxicating liquors, who went to one of the numerous Keeley Institutes; all, with one exception, of these cases went back to the old habits of inebriety. The exceptional case does not attribute his present freedom from his old habit to the Keeley Cure, but is positively of the opinon that he was harmed, temporarily, at least, both mentally and physically, by the drugs that were used. During the last three years we have admitted thirty-one cases of alcoholic and opium inebriety. Of these, twenty-two, and all of them, with one or two exceptions, of alcoholic inebriety, had been from one to three times discharged as "cured" from various Keeley Institutes. One or two of them had been at Dwight under the personal care of Dr. Keeley, and one of them was at one time one of the strongest advocates of the Keeley Cure in the newspapers. I think it is not at all fair to suppose that my experience, especially as regards the thirteen cases first mentioned, was in any sense unique.

The cases we admitted because of inebriety were accepted by the physicians of the Keeley Institute as curable cases, and were discharged by them as cured. They are not a selected series of twelve failures in thirteen patients, but were the only cases of which I had had, previous to my connection with this institution, any personal knowledge as regards the Keeley treatment.

Of the twenty-two cases which have come under my observation here, none are included in the thirteen previously referred to."

The following is from the superintendent of another State asylum for the insane:

"Five cases suffering from insanity, who had been treated at a Keeley Institute, have been admitted to this hospital within the past two years. All of these patients returned to the use of alcohol or other narcotics, usually to both, within seven months of leaving the institute. Two of the patients while under the Keeley treatment added the habitual use of cocaine hydrochlorate to their other narcotics. Two of the cases were probably insane *prior* to taking the Keeley treatment. One became suddenly insane while undergoing treatment. The other two developed insane symptoms a few weeks subsequent to the treatment. One case acquired a subacute peripheral neuritis, affecting both lower extremities, within a few days after leaving the institute."

The superintendent of a private asylum writes:

"My observation covers forty-seven cases of persons who have come under my care after having taken the Keeley treatment. Of this number thirty-two have been alcoholics and fifteen drug *habitués*. Of my own personal knowledge I know only two persons who have taken the Keeley treatment and who have remained cured until the present time.

It is, however, only just to the Keeley system to say that my position is such that

I know more of the unfavorable results of the treatment than I do of the good."

The following letter is from a clergyman of wide experience and great interest in these matters:

1. Very many of the so-called Keeley graduates are really graduates of other "schools." A number of lapsed persons who told me they had been "through" the Keeley treatment I find upon examination to be the representative products of either the "narcotic cure" or the "gold cure" as applied by other than the Keeley institutes. [It was on this account, among others, that we restricted the testimony to ministers and physicians, who should attest that they personally knew the Keeley Institute to be the one from which the persons included in their statistics were graduates.—Editor *Christian Advocate.*]

2. I find the number of men who have tried some remedy far in excess of my largest surmise.

3. The number of "absolutely cured" drunkards of whom I hear, either from former places of residence or in conversation on railway trains, etc., far out-number those I find myself able to discover upon investigation. Careful investigation always lessens the number of professedly cured.

The keeping of this remedy secret is open to serious objections:

1. It prevents the settlement of the question whether the remedies produce the effect attributed to them.

2. It greatly increases the cost, making it impossible for a large number of victims of inebriety to secure the alleged benefits.

3. So terrible are the consequences of inebriety that common philanthropy would lead to the widest publication of the discovery.

4. The reasons given for keeping it a secret are such as cannot commend themselves to sound judgment and philanthropic motives. For be it understood that this does not profess to be a special remedy for a disease that the medical profession generally knows how to treat; but claims to be the sole remedy for a dreadful malady which defies all other methods.

If Dr. Keeley in keeping this remedy is a true philanthropist, then Jenner, Pasteur, and others were men of poor judgment. To meet this Dr. Keeley could write this sentence:

"As well might the railroad martinet have refused to cross the continent in a palace car, because the process of manufacturing steel rails was for many years a secret, as can physicians eschew the wisdom of sages unless it approaches through the devious ways of a code."

He intimates that a great disaster would result through the immediate possession of his formula by the public, in that all sorts of fake institutes would be established and adulterations of the remedies would take place, which would deceive multitudes, who would lose confidence in the true boon to humanity and be lost. The notion that Dr. Keeley has something that the medical profession of the world, which has made such strides within the last forty years, cannot be trusted with is the greatest tax that was ever attempted to be imposed upon the credulity of the public.

There cannot be much more danger of this than in vaccination, by which process, if improper matter be inserted, the ruin of constitutions, and even death, might result. If Dr. Keeley's attitude be correct, there is no physician who has discovered a prescription for the cure or extraordinary relief of any human malady who would not be justified in keeping it secret.

It is especially absurd in this case because, if made known, unquestionably the reputation of the inventor would have drawn to him more practice than he could utilize without extensive organization and much assistance, and would have caused to roll in upon him continual revenues, so that he would in a short time have accumulated a fortune; while all through the land, in every community, reliable physicians of all schools would be treating diseased drunkards and curing them.

That Dr. Keeley has a legal right to patent and keep his remedies a secret is not to be disputed, but to speak of him as a philanthropist in so doing, or allow him any claim to that high eulogium, is a misuse of language. We fear that "the angel wings of philanthropy are not long enough to cover the cloven foot of self-interest."

His claim that he is the sole discoverer that drunkenness is a disease, caused, and caused only, by alcohol, is an assertion

often repeated, but difficult to sustain. Similar claims were put forth in England as long ago as 1838. The American Association for the Cure of Inebriates, established a quarter of a century or more, laid down this very proposition at the beginning, and refused to receive an establishment that would not treat inebriety as a disease. At the first meeting of the association the dogma was solemnly propounded that inebriety is a disease, and various papers were read by Dr. Parrish, the president, to maintain this fundamental article of faith. Five years later the report of Dr. R. P. Harris, physician to the Franklin Reformatory for Inebriates in Philadelphia, who spoke of drunkenness as a habit, sin, or crime, and did not speak of drunkards being *cured* as in the hospital, but as *reformed*, was rejected in order that he might modify it so as to conform with the society's original declaration.

Dr. Boddington, in England, thirty years ago announced his belief that "all habitual drunkenness is a disease."

Neither is it a fact that Dr. Keeley was the first man who ever said or thought or dreamed that any remedy could take away the necessity which exists in alcohol poisoning for the periodical presence of alcohol. It would be easy to print a long list of alleged specifics which have been as positively recommended, have appeared, and disappeared.

The chief objection to Keeleyism is its theory that all habitual drunkenness is a disease, and the general representation it makes that pledge-signing, moral reformation, religion, and other moral considerations, without physical treatment, cannot deliver men from its thraldom. This and the fallacious statement that 95 per cent. are cured by the Keeley remedies produce the following among other effects:

It leads the drunkard who might reform and ought to reform to consider himself a poor, unfortunate person who cannot reform, and who, if he cannot get the Keeley remedies, is helpless, and therefore may as well be reckless.

It leads many to think that they can reform at any time by retreating to a Keeley Cure.

Drunkenness in the beginning is a vice, one of the consequences of which may be disease. Long ago the terms *oinomania* and *dipsomania* were invented to describe cases where the use of alcohol has caused diseases of the nervous system, with also such disturbances of the mind as to produce a passion to drink which is absolutely uncontrollable; and these cases for a hundred years have been treated in asylums for the insane.

But the condition of an ordinary drunkard is very different. The ordinary drunkard—unless he has come under the idea that drunkenness is a disease, and that he cannot help himself—regards himself, unless utterly brutalized, with shame and remorse. He drank because he liked the taste of it, he liked to be exhilarated by it, he liked the high times he had with his boon companions; but he condemns himself and makes up his mind to reform, until he finds somebody who teaches him that it is a disease. He then concludes that "the desire is uncontrollable, and therefore the indulgence is innocent."

As soon as this theory that habitual drunkenness, or drunkenness generally—apart from plainly insane conditions—is a disease became common, followers of Dr. Keeley, many of them with considerable indirect justification from his sayings, began to disparage pledge-signing, moral influence, and even religion generally. We have letters from Keeley graduates who say that whenever you wish to reform a drunkard, the first thing you must do is to take him to a Keeley Cure, and then bring in the moral teacher and the minister; and some say that it is absolute folly to make any moral appeal to them whatever.

Now, in point of fact, we know that the preaching of Father Mathew reformed hundreds of thousands, and they were associated together in temperance societies, and with the church of which he was the priest, the great majority of them remained reformed.

Also, the Washingtonian movement in this country, with many backslidings, reformed an uncounted multitude who lived perfectly sober to old age, many of them prominent citizens. Great numbers are being steadily reformed by ordinary moral and church influences. Of these we have had the personal acquaintance of hundreds.

There are living, to our knowledge, in this country thirty-five ministers of the Gospel in different denominations, some occupying high rank in this city, who were drunkards, some of them of a very low type. One man, a neighbor of ours,

long a hopeless drunkard, reformed, attained a large practice as a lawyer, had an honored career in the Senate of the United States, and died a sober man. Another became governor of one of the New England States, and the most accomplished man in its entire bounds. We have known men to become insane through drunkenness, be incarcerated in asylums, and there form the resolution to go forth and fight their appetites; and they have won the victory without the help of any drug, hypodermic injection, or magic of any sort.

A large proportion of the converts made by Mr. Wesley and his immediate followers were drunkards, and of these an unusually large number became ministers.

The early revivals in New England, promoted by Edwards, Nettleton, and later by Charles G. Finney, were the means of the conversion of many physicians, lawyers, merchants, and farmers who had been drunkards, and who were brought into active connection with the Church, and there found a field for such energy as they possessed which was not exhausted in their ordinary business pursuits.

Thousands, too, have reformed, and are still reforming, without any help from religion, under the influence of moral, pecuniary, or social considerations. It is in general an error to affirm that every person who drinks is sure to die a drunkard. One of our correspondents says: "I know in this town five men who were years ago confirmed drunkards—two lawyers, two merchants, and one mechanic. They stopped drinking of their own accord, and are now, and have been for seven years, sober men."

In that mysterious circular which Dr. Keeley sent us in the days when he was infallibly curing drunkards with two bottles at nine dollars a pair, he published some observations on drunkenness that are very peculiar; but he must think highly of them, as he repeated them in a circular issued in 1892. He has, in the later edition, made a slight change, which is also worthy of attention. This is as he published it in 1880:

"Christendom has been drinking alcohol for nearly nineteen centuries. Alcoholism is a disease of Christendom. These laws, proven by observation of individuals, are verified by the observation of the people of Christendom at large. The greater number of these people who drink at all begin to drink at the age of eighteen years; the greater number cease at the age of thirty-five years. The greater number of those who cease to drink after the age of thirty-five years never recover from the disease, or, as is generally said, they never reform, and are beyond the reach of Christian and other influences.

"It may correctly be inferred from this verification of statistics that drunkenness or alcoholism, like many other diseases, is self-limited. The average duration of the disease—this heirloom of Noah—is about seventeen years. That there is every possible variation from these averages, intensity of the disease, age, and other points in individuals, is apparent to any observer."

In 1892 he substitutes for the foregoing paragraph this:

"Until now, for the first time in the history of the world, this heirloom of Noah has been proven to be amenable to rational treatment."

The simple fact in the case is that there is a very small number of persons who could not reform if they wished and determined to do so. This small number are certainly diseased.

The others when not drunk are in a normal condition, except that, like other vicious persons, their wills are weak in the line of their desires. When St. Paul said, "Drunkards shall not inherit the kingdom of God," he was not speaking against a *disease* that the poor unfortunate could not help, and for which—Dr. Keeley not having arrived in the universe—there was no *cure*, but against a sin in the sight of God; a work of the flesh, placed by him in the very worst possible company:

"Now the works of the flesh are manifest, which are these, adultery, fornication, uncleanness, lasciviousness, idolatry, witchcraft, hatred, variance, emulations, wrath, strife, seditions, heresies, envying, murders, *drunkenness*, *revelings*, and such like."

One of the most intelligent of the Keeley graduates, a lawyer of rank, exclaims: "What does it profit to cure the body and not the soul? I believe that the Keeley Cure can be used rightfully in connection with mission work, and that a man, while he is taking the cure can be

easily led to our Lord for the greater cure. We are using it in our work. We use it as we would any other medicine. Were it not for its great cost we could do more good, perhaps, than we are doing. I do not approve of the indiscriminate use of the cure. We only use it where there is a sincere desire to lead a sinless life as well as a sober one."

Another graduate writes us that the Keeley Institutes, generally speaking, are pervaded by a spirit of indifference, and in some cases of enmity, to the Church and religion, losing no chance to denounce both as valueless touching inebriety; that many of them claim that the Keeley League is what men should join; that it is worth more to them than ten churches would be.

One of our correspondents, who has had personal experience in his own family in the reformation of a relative, and who has often visited Dwight, informs us exactly what the treatment proposes to do for the patient, and what it does not:

"It does not propose to act as a preventive, in the sense that it renders it impossible for the one treated to go back to his evil way and contract again the disease or the craving appetite from which he has been cured, if he so inclines. It does not produce a dislike for liquor, or cause such disgust at its presence, or nausea if tasted, that relapse to the craving is impossible. It only professes to remove the disease caused by alcohol, and the unnatural craving for it which denotes the diseased condition, so that the one treated no longer finds need of the stimulant in his system, and no craving for it which causes suffering if it be not gratified. In other words, it proposes to cure the abnormal appetite, and to restore the victim of it to the condition he was in before he contracted the appetite for drink. It leaves him without any more necessity to drink than was upon him before he ever indulged; and yet just as free to drink, and as capable of contracting the habit and the appetite, as if he had never drank or never taken the treatment. It professes this, and in my humble judgment it does it, and does in almost every instance, and without producing any physical or mental ill result."

It would be well if this were more widely advertised, and some of the publications sent out by the Keeley Institutes corrected to agree with it. Many of the graduates declare that "the appetite has been entirely destroyed," and some of them say that they have "an absolute aversion to liquor." Under the influence of this, numbers have gone into temptation and have fallen. Occasionally such statements as this appear in the advertisements of institutes:

"It is not uncommonly the case that the effect of the treatment is to bring about an actual aversion for liquor; but this is not by any means essential to the success of the treatment.

"That having been accomplished, it no longer requires any effort of the will power, but simply the exercise of the ordinary reasoning faculties, to abstain entirely from the use of liquor."

The last paragraph in the foregoing statement is extremely dangerous, and shows little understanding of the purely mental tendencies, apart from the physical effects, of any habit long continued.

The secretary of one of the chief Keeley Clubs, writing us a respectful letter, reveals the extravagance of the view that ordinarily prevails among representatives of the movement, when he says:

"We, as Keeley men, know that drunkenness is a disease which can only be cured by scientific treatment. The clergy, as a rule (there are noble and notable exceptions), insist inebriety is a vice, to be overcome by exercise of the will, prayer, and penitence. We hold that a sick man should be cured by the doctor before the clergyman should step in. As long as this indifference exists the clergy are not likely to be well-informed on Keeley matters."

CONCLUSIONS.

That a large number of persons have been reformed in connection with the Keeley agencies, and have remained sober and totally abstinent for many years, bringing happiness to homes that had known the meaning of the word for a long time only by a recollection, we have no doubt.

We believe that the number permanently reformed is not quite so large as our table of statistics shows. Private correspondence has brought to our notice many cases where they had been sober for the period of nine months and returned to drinking, sometimes after one, two, or three years of abstinence.

Some of the graduates think that we should have made the length of time at least a year, affirming that genuine dipsomaniacs often keep sober for that length of time between their periodic outbreaks.

Also, we believe that some scandal is brought upon the treatment by numbers of persons who take it merely to please their friends, who have no moral abhorrence of the life of the drunkard, but have been persuaded to go. These afterward resumed their associations, and the Keeley Cure having done nothing for them, except to put them relatively to resuming drinking where they were before, they, apart from the mental associations, go back to their former lives with avidity.

Yet we believe that many who never would have reformed do so with the aid of this system. If thirty per cent. or twenty-five per cent. are thus reformed, we should not wish to be placed in the position of deterring any from trying it.

While there are many fake cures in the country besides the Keeley system, there are several systems as worthy of confidence as that, and subject to the same sort of limitations. Some of them do a flourishing business, using remedies that are apparently substantially the same, paying no royalty upon their medicines, and giving treatment at less cost.

How are the results brought about?

Many elements are involved: the personality of Dr. Keeley; the surroundings; the testimony of cured patients; the amazing free advertising; the power of mystery. Seventy-five years ago a medal was passed from man to man which produced such an impression when worn over the heart as to make many believe they could never touch liquor again.

The psychological influence of the positive statements of what the remedies will do is great. The requirement that a person before going there must wish to be cured gives him an excellent start. The fact that many who go there never would have gone except as a last desperate hope also has a favorable influence.

The celebrations, the Keeley leagues, the organization, and all those arrangements which enable one man to lean against another, and which have an effect similar to formation in military companies in the time of battle, are not to be forgotten.

It has been said by some that if Dr. Keeley were to reveal his remedy it would lose its efficiency. No doubt in that case it would lose some of its charm. But there is no reason to suppose that he is not using a system of medicines adapted to help the drunkard over the crisis and build him up.

Had we a drunkard among our personal friends to-day we should first seek to reform him by moral, intellectual, and religious means, appealing to his moral sense, applying every possible enticement. We should endeavor to bring him to a deep consciousness of sin, as well as of depravity, and a soul-harrowing repentance. And if we could induce him to become a true and earnest Christian, we should endeavor to fortify his resolution and conserve his experience by persuading him to an extraordinary devotion to secret, family, and public worship. If we took him to any reformatory, it would be to one where spiritual influences were most conspicuous.

This is upon the assumption that we were satisfied that he wished to reform, and that he felt himself a sinner for yielding to his vicious inclinations, and upon the further assumption that we did not believe him to be a diseased man, requiring any special physical treatment. Should we fail, we should try to induce him to go to a Keeley Institute, after carefully inquiring into the moral character of its manager, so as to surround him with the best possible influences. We would try to induce him to submit to this mysterious process, or any other that could produce witnesses to its efficiency, whether understanding it or not.

A helpless drunkard cannot be made worse by any process that men or devils ever invented; and if made better, a multitude of loathsomenesses, vices and sins may be covered, a soul and body may be saved from death, and peace and hope brought to breaking hearts.

But we should not trust the Keeley Cure alone, and to every graduate of a cure that reads these remarks we solemnly say that neither God by His Spirit nor man by his science will destroy the susceptibility of being stimulated by alcohol. The nerves, the blood vessels, and the nerve cells are all there, and the man who has taken the Keeley Cure can never safely forget that these words apply to him: "Let him that thinketh he standeth take heed lest he fall."

About fifty per cent. have relapsed.

As with the passion for drink, so with the constitutional animal passions. They must ever be restrained by will, sustained by moral principle, divine help, and the avoidance of temptation. As a man who never drank and who has no hereditary tendency may become a drunkard, so a Keeley-cured man may become a drunkard.

We believe also that there are—both in this country and in England—institutions based upon moral treatment, total abstinence, and spiritual helps, the average results of which in producing reformation, without treating the case as one of physical disease at all, are as great in number as those produced by Keeley Cures, and equal at least to them in permanency, with the inestimable advantage of sending the reformed man away with a will re-established, manhood developed and a Christian life well begun.

SOCIETY REPORTS.

TENNESSEE STATE MEDICAL SOCIETY.

(*Continued.*)

S. T. HARDISON, M.D., Lewisburg, read a paper entitled

PUERPERAL ECLAMPSIA.

See page 725.

DISCUSSION.

DR. J. A. CROOK, Jackson: One or two points as to the treatment I would like to bring out. In sthenic cases, the doctor recommends bleeding. I do not believe bleeding is called for under any circumstances. It is plain to any who attends a parturient woman, that before she gets through labor there must be the loss of considerable blood. This sanguinous discharge will be kept up for several days; a drainage and leakage upon her system which will tend to draw her down. Further, the process of lactation will have to be kept up; which also will be a drain upon her system. Every favorable indication accomplished at the time by blood letting, can be accomplished by chloroform or chloral or other remedies. No one, so long as you keep them anæsthetized, can have a convulsion. The convulsive fit must occur during the reaction, or when consciousness is restored from the anæsthesia. Hence, although I have had those of strong, full, robust, healthy character, yet I have never had a case not relieved in the way I have mentioned. I think Dr. Happle's view of bleeding for pneumonia is applicable here—if I should find a case where bleeding would do good, I would bleed, but I have never found such a case.

I have never used veratrum viride, but one of my associates has told me that Norwood's veratum viride is an absolute specific. I think it is nearly ten years since he told me that, and, in the last few months, he related case after case where he used five or ten drops—but I doubt that he did use quite ten drops—and in every instance he had relieved the case almost with the first dose. Some of you, who were present at the meeting of the Western Tennessee Association, will remember the subject discussed there, and our worthy president claimed he had found veratrum viride, in ten drop doses, to relieve the condition almost immediately. I wish to enter my protest against bleeding a patient who has to be bled, at any rate before she gets through the process of nature.

DR. T. K. POWELL, Danceyville: I am feeble and don't like to talk. I wish, however, to differ from my friend Dr. Cook, and to endorse everything in favor of bleeding. I know he is an old man with experience and should know about these things, but I know the division of the condition into two separate conditions, the sthenic and asthenic is correct. I read a paper before the society a few days ago, in which I took the same position. That we should never resort to blood-letting, I

think, is an erroneous idea. When there is a flow of blood producing an effect upon the brain, I think nothing has so good effect as the old-time practice of our physicians of forty years ago, of bleeding immediately as a prophylactic measure. If necessary, it would be well to bleed two or three times before the woman is confined; and in the cases in which you follow up blood-letting before the woman is confined, frequently you may avoid these convulsions during confinement.

The use or veratrum viride is also valuable. If you give chloroform in these cases, which I always do, you will find it necessary to keep the patient under the anæsthetic all the time. The bleeding has a more permanent effect and the veratrum has a more permanent effect, but the chloroform, which we always give, does not have a permanent effect. I have kept women under the influence of an anæsthetic all night to avoid convulsions.

Of course, when the patient is in position to be delivered by forceps or by turning, we have to resort to that Where the head is down on the perineum, I find the short forceps much more convenient than the long instrument. I have forceps which I use without even moving the woman. Where the action of the uterus has stopped and the head is down on the perineum, it is well to use the forceps.

I avoid these cases as much as possible by the prophylactic treatment, but when it is necessary I think the treatment suggested is proper and best.

Dr. W. A. H. Coop, Nashville: I consider this condition as that of hemorrhagic infarction of the brain, and I do not think that venesection in such a case can be too strongly impressed. No other remedy can have as good effect upon hemorrhagic infarction of the brain as venesection. I use chloroform and veratum viride, but the first thing I do is to anæsthetize the patient and open a vein with my scalpel. My patients have all recovered except one, who had the hemorrhagic infraction, and the brain was totally disorganized, or nearly so, when I saw her.

Dr. J. S. Caine, Nashville: I believe we should pay more attention to the prevention of this condition. Eclampsia is evidently the result of the defective elimination, and autopsies have proved that nearly all cases dying of eclamsia have had an exfoliative nephritis. Examination of the kidneys proves that there has been defective kidney action, and poisonous elements have accumulated in the blood, largely consequent upon this kidney condition, which, acting upon the convulsive centers, produces the condition of convulsion, or eclamasia.

We can generally anticipate it. While there are certain cases in which eclampsia occurs without any warning or indications which point to it, as the general rule the danger signal is held out if we look for it; and, usually taking the patient in time, we can guard against the convulsions.

Now as to the line of treatment to prevent this complication. When we discover the symptoms of edema and headache, and that class of symptoms which generally precede the eclampsia, if we are not satisfied that it is this condition, an examination of the urine will usually show defective kidney action; the chemical examination of the urine will show albumen, or the miscroscopic examination will show caste—both evidene of the exfoliative condition. Our treatment, then, is calomel followed by salines, thereby reducing the blood pressure and encouraging the elimination of poisons, which, acting upon the convulsive centers, would later on produce eclampsia.

If this precaution is taken in time, we will have no eclampsia; but if it is not taken and we are ushered into the presence of a case of eclampsia, then we have the two conditions described by the essayist—one, in the plethoric primipara; the other in those cases of adynamic females—and we have to treat them much as the doctor has indicated.

I believe in blood-letting in those cases. What are we to combat? In these cases we have the centers flooded with the excess of blood; we have the brain flooded, not an infarction, probably, but an effusion into the ventricles, to be followed by coma and death. That is the condition we have to fear. Chloroform will palliate; set off for a time the convulsions, but there is nothing curative in it, and shortly you will have effusion into the ventricles of the brain and your patient will drop to a coma which is beyond relief. Now, relieve tension by free blood-letting and you will relieve danger from this source. Chloroform only pal-

liates; chloral only palliates; and veratrum viride only palliates. We must do something to get rid of the poison and also to relieve the pressure. Blood-letting does both. After you have relieved the blood pressure, you can resort to chloral and that line of treatment.

Dr. J. B. Neil, Nashville: I heartily endorse the paper because of the truth that is contained in it. I had the honor, before moving to the city, to be associated with Dr. Hardison in practicing for fourteen years. I believe during that time he and I had more cases of puerperal eclampsia to contend with than any other two medical men in this section of the country, and I know the paper written and read before this society is based upon large experience.

I heartily endorse what Dr. Coop and Dr. Cain have said in regard to blood-letting. I think it is the sheet anchor in the treatment of eclampsia. I never went to a case of eclampsia that I did not open a vein. Never. And without egotism I can say I have lost but one case of eclampsia, and I believe she would not have died had I been able to remain with her. In that case I severed the temporal artery, because I could not stay with her and believed that was to be her salvation. But I believe the brain was already so full of blood that she could not have recovered anyway.

The action of veratrum viride is temporary. Dr. Crook speaks of giving six, eight or ten drops of veratrum viride. Why we had reported here in the academy, a case where a man gave a teaspoonful with good effect. He asked me my opinion, and I said the veratrum viride was either very poor, or he had an extraordinary patient.

Dr. T. J. Happel, Trenton: I believe it is a discredit for any gentlemen in the medical profession, to have a case of puerperal eclampsia in practice. I want to go upon record upon that point. I make the statement for the reason that if a physician keeps well posted upon all the cases he is to treat, he can prevent puerperal eclampsia. I lay down that proposition after twenty years experience.

The course Dr. Cain speaks of is the line upon which to treat these cases. See that all the secretions are in proper condition. Don't wait until your attention is called to a patient. Don't wait until she has headache, and the feet and face are swelling. Find out as to the patient's condition, and keep her posted as to the course to pursue. Keep all the secretions in the proper state and there will be no puerperal convulsions. We may have nervous shock, a nervous explosion during labor, in the case of a primipara, which you can very easily control with chloroform or chloral. I do not believe, however, that such can properly be called a puerperal convulsion.

But there are cases in which we are called to see in this condition, a patient with whom we have had nothing to do. Of course we are not to blame for these.

As to the curative treatment. I will not go to the extent I did in pneumonia, and say I never saw cases of puerperal convulsions which needed bleeding, for I have, and I have bled them. They were not, however, I wish you to understand, my cases. The last case of puerperal convulsions I had anything to do with, I treated with pilocarpine alone, and a hypodermic injection gave relief. There was a slight convulsion after the first hypodermic, but none after the second. I get the same effect from the use of this that you will from blood-letting. The secretions are poured off and the patient is relieved—the patient is depleted that way. You accomplish what under ordinary circumstances you would accomplish with bleeding. Therefore, try pilocarpine, and, if that does not do, bleed. I also use chloroform, chloral and veratrum viride.

As to the case Dr. Neil referred to, where a party gave a teaspoonful-dose of veratrum viride, the stomach evidently did not take it up.

Dr. Neil: It was used hypodermically.

Dr. Happel: Then, I cannot see why it acted as it did. Of course, the proper way to use such remedies is hypodermically.

Dr. W. D. Haggard, Nashville: I am of the same opinion as Dr. Happel, that it is no credit for a man to have a case of puerperal eclampsia. I believe it is preventable in the main. As pointed out by Dr. Cain, we have more or less nephritis and albuminuria. What are the indications to be met? The indications are to keep the kidneys performing their functions and to keep the bowels well open, and that with saline cathartics.

I had the pleasure of spending a winter

in New York, where I met Dr. Fordyce Barker and learned from him an important lesson and I could not have learned from a more eloquent and distinguished man, nor one who has done more for the science of obstetrics. That lesson was to begin early, in the later months of pregnancy, and with saline cathartics get the bowels open and keep them acting well, and above all else to keep the kidney acting well. Gentlemen, I am no routinist, but Dr. Barker gave me a prescription, as follows:

Sulphate of magnesia.....	Equal parts.
Carbonate of magnesia.....	
Sublimed sulphur.....	
Cream of tarter.....	

Dose. One tablespoonful from one to two times per diem, as required, to keep the bowels well opened, which keeps the bowels open and altogether acts so well that I have stuck to it. If you keep the kidneys and bowels thoroughly on the alert, you are not very apt to have the conditions which precede eclampsia.

Dr. J. D. Plunkett, Nashville: As to the several statements that it is not necessary, and that it is to the discredit of the medical men to have a case of puerperal eclampsia. Whether there is a Bright's disease, or a kidney complication of pregnancy has been thoroughly established or not is a question open for further investigation, but we do know that the patients we are called to see may be divided into three classes: First, those whom we have charge of from the earliest months of their pregnancy until that period is ended; second, our care beginning later, say at the six or seventh months on; and third, those that we are first called to see within a few days of labor. If we are called to see a patient, we are engaged to attend during pregnancy and confinement, it is well always to examine the urine. If called early, and if you discover the presence of albuminuria; if you suspect a kidney of pregnancy; if you suspect a Bright's disease, or anything that will cause puerperal eclampsia, then you may perhaps abort the condition by keeping open the emunctories. But the condition may grow worse and worse, and the patient may develop puerperal eclampsia despite all the means you have used.

Called to see a patient just before she is confined we may not be responsible for the development of puerperal eclampsia, but how often does it occur that we know the constitution and make-up of our patient? We may be called suddenly to see her in confinement. There is nothing whatever in her make-up which points to any form of Bright's disease, and yet, without any warning, as it were a bolt of lightning from a clear sky, twitchings, unconsciousness, convulsions and death supervene; and still some say it is not necessary to have puerperal eclampsia, and it is not to our credit. Well! it is a difficult condition to treat

There is another question, the question of diagnosis. During the course of labor there are several things that can, and will, and do come up. Every convulsion during labor is not puerpal eclampsia. Convulsions may be due to epilepsy, to hysteria, apoplexy, cerebral hemorrhage, cerebral embolism or thrombosis, as well as to puerperal eclampsia. It is not necessary to state the diagnostic points with which all are familiar. In the cases of puerperal eclampsia I have seen, I have taken special care to examine the urine microscopically, and, with the exception of two cases in a series I have had in my own and in the practice of others I have seen, I have found every evidence of kidney disease—tubecasts, blood and hyaline, and puss-cells, and all the manifestations. I am of the opinion, while you may find some casts in a particular specimen of urine you examine microscopically, you may not be able to find the presence of renal disease; you may not be able to find albuminuria.

Dr. J. A. Crook, Jackson: I knew, when I took the position I did, I was going to meet with antagonistic views, and I did it to get the members to think.

Dr. Powell suggests that chloroform, chloral and veratrum viride are merely temporary in their effects. What effect has bleeding more than temporary? Does it aliminate by the kidneys? The discussion has proposed elimination by the different emunctories of the body. Does bleeding do this, or add to the kidney functions whatever? I cannot see that it does.

Another thing is the danger from cerebral engorgement, apoplexy or infarction. What does not chloroform do? What does sleep do? Is not sleep an anæmia of the brain? Does not the chloroform, in the same way, bring about the same result as

you propose to bring about the bleeding? And further, Dr. Powell said chloroform must be kept up. Why! You can give chloroform and chloral until you get your patient thoroughly under influence, and after this I have never had a convulsion.

In reference to the use of pilocarpine, mentioned by Dr. Happel, which would produce free diaphoresis, it seems to me, while you might gain an advantage in one way, you would deprive your patient of the strength she will need later on.

Notwithstanding the cases which have been bled and have gotten well in spite of that fact, I think bleeding has not added to the chances of the case getting well, anything more than would the use of chloroform or chloral and these other remedies.

DR. S. T. HARDISON, Lewisburg, (Closing discussion): I tried very hard to show two distinct classes of cases, and I have never for a moment thought of bleeding a patient with defective elimination from the kidney. We have some cases we can explain better in another way than ascribing them to a reflex nervous condition. These are the plethoric cases, I believe Dr. Plunkett had two cases in which there was no evidence of diseased urine.

I want to reply to the point of the innumerable kinds of convulsions presented. It is true there are many kinds of convulsions, but it is strongly probable that convulsions occurring during pregnancy are due to puerperal eclampsia.

I believe Dr. Crook claims we will need all the blood later on. Usually, after the delivery you do not have the convulsions. When we do have subsequent convulsions it is because there has been very little loss of blood and therefore we still have the full plethoric condition. The blood which Dr. Crook expects to be lost later on, may be a good reason for delaying bleeding—if the loss occurs.

I think Dr. Happel's remark is true, that it is not a credit to have cases of puerperal eclampsia. I would always rather it would happen, as did his, in the practice of some brother. I believe if we were up on preventive measures we would be able to get rid of the trouble. A large per cent. of my patients have not come under my care until I was called to attend them in labor. Sometimes the eclamptic seizure is the first thing that greets me upon entering the room. Of course, in such cases I am in no way responsible for the advent of this condition.

As to the cases due to sepsis. I think it requires considerable care to guide a patient with tube-casts and albuminuria, so convulsions will not supervene.

I notice Dr. Happel said he would try the pilocarpine and if it did not succeed he would bleed, which carries to my mind the belief he has more confidence in bleeding than in the pilocarpine.

As to large doses of veratrum viride. I tried to bring out in my paper the point that there is an increased tolerance in parturient patients for veratrum viride. By repeating the ten drop doses frequently, we do not have the symptoms that show themselves in other instances. I do not know why this is true, but with my limited experience in parturient patients I have never been disappointed in the use of veratrum viride as a remedy, and have learned to use it in large doses.

T. J. HAPPEL, M.D., Trenton, presented a paper on

THE OPIUM CURSE AND A PREVENTIVE.

(See page 727.)

DISCUSSION.

DR. J. B. NEIL, Nashville: I regard the paper of Dr. Happel as one of the best that has been read before this society. I endorse what he says on the point of transmissibility from parent to child. I firmly believe it is transmissible from parent to child as a condition of nervousness. If only the man or the woman using the drug suffered, the evil would not be so great, but the essayist has certainly brought before us case after case demonstrating the fact, which has been demonstrated before, that the condition is transmissible from parant to child.

DR. T. K. POWELL, Danceyville: One feature of the paper I object to. The essayist recommends that people who were addicted to drink and to using opium should be put in an asylum and kept there until cured. The question arises in my mind, as to which is the better, to let these persons go ahead and drink and use opium until they die, or to let the other nine-tenths of the people pay taxes to support them. I think it is wrong to encourage the erection of so many institutions. I think there is a false sentiment

along that line, and one of the worst things we have done in Tennessee was to do away with the system of correct work.

Whilst Dr. Happel is perfectly correct in saying we should be guarded in the use of opium, it should not be forgotten that we can go to the other extreme and encourage the use of too little. I am a believer in the use of opium under proper circumstances, but I think Dr. Happel is correct, and we should attempt to overcome the indiscriminate use of it. But deliver me from being taxed.

Dr. W. L. Scott Dixon: I have before my mind, a patient whom I attended in confinement about sixteen months ago. The mother said she could not take twenty grains of morphine three times a day, and attend to her regular business. Twenty-four hours after delivery of the child they sent for me, saying they couldn't do anything with the child. I asked if they had given it anything and they said: Yes! they gave it thirty drops of laudanum after I left, but couldn't do anything with it. The child is as restless and nervous as it can be, and its whole life has been spent in nervousness, besides it being under the influence of opium.

I hope this subject will make a greater impression on the public than ever before.

Dr. Hardison, Lewisburg: I wish to dissent from Dr. Happel on two essential things. I take it from his paper, that he does not hold the profession guilty to any great degree. In that I differ from him. I believe it is not intentional, however. But I know there is a careles habit among the profession to give opium and morphine in trivial diseases. The patient has the prescription refilled and becomes a confirmed opium or morphine user before he is stopped. I believe, if we are to get to the bottom of this question, we will have to be very careful to exclude that handy prescription for morphine when we want to get rid of a patient with pain. I believe the druggists over the land are, in the main, good honest men; but in the law suggested by Dr. Happel they do not believe, from the manner we are handling the drug, that they are justified in considering it a poison. I believe we should say to the druggists in every city and village and hamlet in this State: "Here is the law. You are not permitted to sell the drug without a prescription." When we are able to impress that duty upon them, we will have there co-operation. I do not believe pharmacists and druggists, as a class, would begin to disseminate this habit for the little sum of money they receive. Then, I think we should have the facts spread by the Legislature before the people, that this is a dangerous drug. In every town and community and every country cross-roads store, morphine and opium are being sold, and you can pick out a number of families in every community who are taking opium or morphine daily. The morphine-user always thinks he knows how every evil can be cured.

One other suggestion, and it is rather difficult to make, but there are too many doctors taking morphine, according to my limited experience. We are very good in theory, but not, I fear, always so in practice. If it is known that for every little cold, and for the hundred times you have had the *grip* in the last year, you have taken morphine, your patients will do the same thing. There is hardly a physician in this society but has treated a neighboring physician who has said he was taking morphine. The profession should raise a note of warning. If it is not right, every druggist should be responsible, and that would have a curtailing influence in the sale of this drug. If every person using it must have his name written down every time he purchases the drug, that fact will have a tendency to stop the use of the nacotic.

Dr. Lewis: I have had a limited experience in the treatment of morphinism and I have come to the conclusion that the habit is transmitted, as much so as the habitual use of alcoholics. We classify alcoholism as dipsomania—a form of insanity. I am thoroughly convinced morphinism is as much, if not more, a form of insanity.

As to the treatment of those cases. The morphine patient, first, has transmitted to him a peculiar neurosis. That peculiar nervous system requires a certain amount of morphine to elevate it to its normal tone; but, in taking away the morphine, you will, invariably, find these patients take more morphine than is absolutely necessary. I always, in taking the morphia from the patient, strike a ratio of a fourth or a third of the amount they are taking when they enter the hospital. I have received patients taking as much as ten or twelve grains per day, and brought

them down immediately, to three or three and a half grains per day. I do this by the substitution of strychnia for the amount of morphia I have taken away from them. I have received a patient taking twelve or thirteen grains a day, and brought him down to three grains per day, by the substitution of two or more subcutaneous injections of a third of a grain of strychnia. I can, in this way, quite readily take away the morphia. The strychnia seems to take the place of the morphia wonderfully, and to give a normal tone to the nervous system.

These patients are in the habit of increasing the amount of the morphia. A certain amount of morphine is required to produce a normal tone of the nervous system, and they take the excess to enjoy the pleasant dreams and thoughts that ensue. Their flow of ideas is quickened.

If you give them only enough to produce the normal tone, they will have none of these pleasant dreams or thoughts, only the normal condition.

Question:—What do you think of Keeley?

Answer:—I don't agree with Keeley. I have two or three cases now that Keeley has been working on. You ought to see their arms, from the wrist to the shoulder.

Dr. T. J. Happel, Trenton, (Closing discussion): I have written a condensed paper and not included everything I would like to have touched. In regard to Dr. Powell, he and I are, the one on top and the other on the bottom, in everything, figuratively speaking. He objects to the idea of a little money being expended for this, and thinks we should let these people go on and kill themselves. If they would do only that, it would be all right; but they don't do that.

If you have a patient leading a life which will cause misery to the children, send the patient to the asylum and have her cured. This is a subject not to be measured with dollars and cents, although I know the tendency is to measure everything that way.

It is a matter of personal liberty to a certain extent, but it affects the community. It affects unborn children, we should not be responsible for the sins of the mother and father. The law throws a cloak around the money of the child, and why should the mother or father of that child unborn, be allowed to blight the life of the child? It would be better to put the father or mother in the asylum. This will cost in the end very little in dollars and cents. In many cases they will never return to the degrading habit. Send them there; some relative will be interested enough to prefer the charge. I have seen families where it would be the greatest relief in the world to get the parents in an asylum. Don't put it in the scale with dollars and cents.

As to the profession being guilty of helping to spread this habit. I grant the profession is accidentally guilty. This paper is written to influence physicians to avoid as much as possible giving opium. I think the paper set forth, that the only cases where we are justified in using it are, such as cancer, where the patient is suffering untold agony. Then let the patient's pain be relieved. I believe our law should be so changed as to forbid any man practicing medicine who makes a sot of himself with drink or by using morphine.

Patients can be kept in the jails and treated there just as well as by erecting asylums, but we have no legal right to do that.

That is what I want to get. We should get the legal right to do this, for other rights should be considered than those of the individual.

The paper was not intended to include chloral or other drug habits, but Dr. Baxter's position, in reference to the proprietary medicines, was well taken.

I did not say in the country generally, opium is not used, but I said this, in the country the female sex does not take to the use of alcohol. Women in the country villages are not using liquor. In the cities they use whiskey as well as opium. In the country they use opium to a great extent, perhaps in as large proportion as in the cities.

As to treatment. My paper did not propose any. It is entitled, "The Opium Curse and a Preventive." I did not propose to enter into the treatment, because it would take a book to discuss the treatment. But the best treatment is to put the patients in a jail or asylum, take charge of them as you would any other lunatic and break them of the habit there. When broken, you will find they will not go back to it as the hog to his wallowing in the mire.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES.

Dr. W. W. Bowes describes

A New Varicocele Needle

by the use of which varicocele may be treated by ligature without danger of including the dartos in the ligature or of piercing the veins with the needle.

Dr. J. A. Bloom reports the

Treatment of a Case of Epithelioma with Lactic Acid.

The patient was a feeble man, sixty-five years old, who had an epithelioma of one cheek which had taken a rapid growth after a slow increase for five or six years.

The author thought the case unsuited to radical operation and applied Moorhof's treatment of lactic acid. Once daily a paste of pure lactic and salicic acids about fifty or sixty per cent. was applied.

This caused not much pain and the strength was increased in about a week.

Six or seven weeks later there remained only a clean, smooth, non-elevated cicatrix and the author thinks the failure of others to achieve the same result is owing to want of thoroughness in making the applications.

Dr. Gardner W. Allen gives some remarks on the

Treatment of Cystitis.

Most of the cases recorded were gonorrhœa and of the usual type—frequent and usually painful micturition with more or less retention. The best results were obtained by benzoate of sodium internally accompanied by irrigation of the bladder. A saturated solution of boric acid is very satisfactory for this purpose in many cases, but when something more than mere cleansing is necessary instillations of a solution of nitrate of silver or of permanganate of potash are preferable. The author uses ten or fifteen minims of a solution of nitrate of silver one per cent. or weaker, and if this does not seem beneficial he substitutes a solution of one to four thousand or five thousand permanganate injecting five ounces and allowing it to run slowly out, then five ounces more, etc., until an unchanged solution runs out. Two or three ounces are now injected and allowed to remain, the secretion of urine decomposing it before any injury can result. This treatment is usually efficient. Injections are made at intervals of four or six days and the strength of the solution gradually raised to one to two thousand. The use of a large sound before injecting is advised.

BUFFALO MEDICAL AND SURGICAL JOURNAL.

Dr. Willis E. Ford writes of

The Dangers of the Uterine Tampon.

The author favors dilatation and curettement of the uterus for endometritis, etc., and thinks he has cured an encysted salpingitis by this means followed by a gauze tampon, but in most cases does not favor a tampon of any kind, thinking the gauze acts as a seive rather than as a drain and retains the substances we are most desirous to get rid of. When dilatation is to be performed we should first assure ourselves that there are no adhesions or malpositions, and if these exist they must be relieved before we dilate. When these directions are ignored serious injury is apt to follow.

Dr. Frank J. Thornbury is quoted as reporting a

New Micro-organism Found in Pork.

It belongs to the saccharomyces and is pathogenic, killing white mice and rats within twenty-four hours after injection.

IN THE AMERICAN MEDICO SURGICAL BULLETIN

Dr. Frederick A. Lyons has an article on

Gonorrhœa in Women.

The subject is, he thinks, poorly understood even by many good surgeons, and frequently is passed unrecognized on account of an old conviction which should now be given up; that gonorrhœa in women is usually evidenced by vaginitis and that it is the exception to find the urethra involved early in the disease. The author criticises several writers for teaching this theory at the present day, and quotes cases where he has found the gonococcus in the urethra, vulvo-vaginal glands and follicles and in the cervical glands when there was no vaginitis and when there had been none.

Failure to recognize this leads to wrong treatment and perhaps to the establishment of serious pelvic disease.

JOURNAL OF NERVOUS AND MENTAL DISEASE.

Dr. Wm. F. Drewry writes of

Circular Insanity,

and reports several cases in which the patients had for a varying period a condition of melancholia or depression, followed by another interval of excitement or mania.

His conclusions from personal observation are that circular insanity is a rare but distinct form of mental disease for correct diagnosis of which it is necessary to have a patient under close observation for some time. There is probably no true period of convalescence between the attacks. The excitement may vary in intensity from a simple feeling of self-satisfaction to maniacal excitement, but the incoherence and confusion are not so marked as in ordinary mania, and the depression may vary from simple torpor to obstinate melancholia with suicidal tendencies. There may or may not be delusions, hallucinations, etc.

There is no distinctive cause for the affection, for in one case it seemed hereditary, in another due to fever, in a third to syphilis. The symptoms may be temporarily improved but no system of treatment has yet seemed to give permanent benefit.

Dr. J. Madison Taylor reports a case of

Epilepsy Cured by Operation.

The operation was performed by Dr. T. G. Morton seven years ago and the case was reported five years ago—the further report given now because no convulsion has since occurred. A healthy boy about three years of age fell fifteen or eighteen feet fracturing his skull at the right parietal prominence. No convulsion ensued and the wound healed promptly. Occasional slight spasms limited to the left arm and beginning with an aura felt in the forefinger and thumb soon began. These appeared to be outgrown until at ten years of age when much excited by a problem at school the aura was again felt and followed by flexion of the fingers, wrist and elbow, bringing the clenched hand into the axilla. The left side of the mouth now became drawn down and the left leg became somewhat the same condition as the arm and the boy fell. Attacks usually induced by excitement now occurred once or twice every month and were preceded by a minute or a minute and a half by the aura. The patient or his parents could by unlocking the fingers and vigorously rubbing the palm of the affected hand usually prevent the development of the attack. Consciousness was not lost during an attack and to check the convulsions it was necessary for the patient to turn on the left side as they seemed to continue while he lay on the right.

It was found that pressure on the seat of the old injury gave a sickening sensation and if continued led to convulsions. An operation was therefore performed by Dr. Morton and some pointed masses of bone which pressed on the cortex were removed. No particles had penetrated the substance. Recovery was uninterrupted and the only semblance of a return was a fall followed by severe pain for some hours caused by a companion throwing a ball of wet paper and striking on the seat of injury.

Dr. Philip Meirowitz reports a

Case of Tetanus.

A healthy schoolboy of good antecedents, twelve years old, was seen three weeks after a severe beating in which the patient had been stood on his head and struck on the back. No bruise nor break of the skin was to be seen. One week later the boy had a splinter run into his hand and after its extraction the wound readily healed. One week later the boy complained of languor, stiffness of joints, inability to open the jaws as wide as usual, but continued to play as usual. The following morning he was found with limbs rigid, jaws locked, conscious, and without fever, convulsions, or headache.

The boy was treated for five days without improvement and was seen by the author on the sixth, at which time there was risus sardonicus, general rigidity of the limbs, and well-marked opesthotonos, the pupils were of medium size and reacted to light, and the respiring, while usually regular, was sometimes of the Cheyne Stokes variety. At times an increased tonicity of the affected muscles was noted to appear and in a few minutes relax again. At all times consciousness was complete, but pain which was scarcely noticed at first became so severe as to cause the patient to beg for relief. The following day the patient died in coma, the heart beats being imperceptible five or six minutes before the last deep inspiration was noticed.

When called to see the case the author attempted to give relief with chloroform, but even a few inspirations caused Cheyne Stokes breathing and had to be stopped. Hydrochlorate of hyoschyamine, morphine and curare were all unsuccessful and then an enema of milk and whiskey with thirty grains of chloral was given with some good effect, but the patient died in the sleep induced by another given six hours later. In the opinion of the writer the indications in a case like this are to calm the nervous system by narcotics freely used, and to sustain the strength by nutritive enemata, and he notes the neglect of this treatment in this case. The case is etiologically interesting also, the question arising whether it originated in the beating, the poison introduced with the splinter or in some different unrecognized manner.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

SURGERY.

Treatment of Urethritis.

Writers never seem to tire of giving their experience in the treatment of urethritis. Dr. Ramon Guiteras, in the *Medical News*, is inclined to conservative methods and does not lay much stress on the gonococcus and endoscope. He concludes:

1. That it is impossible to treat urethritis according to any given rule at the present day, a successful method not as yet having been discovered.

2. That specialists are much better able to treat it successfully than the general physician, and to go further, that a patient receives better treatment from a specialist in a dispensary than from a general physician in private.

3. That injections checking all discharge or reducing it to a moisture about the meatus, such as those of mercuric chloride, potassium permanganate, and silver nitrate, are the most successful means of treating a fresh attack, and that of these silver nitrate is one upon which most reliance can be placed.

4. That in all cases the patient should be treated conservatively, and the treatment should be modified according to the symptoms.

Propagation of Affections of the Tympanum to the Brain by the Way of the Carotid Canal.

Koerner demonstrates anew the fact that canaliculi conveying nutrient vessels from the carotid canal to the mucous membrane of the drum cavity may become the passageway of microbes of otorrhea either with or without caries, and cause arteritis, lymphangitis, phlebitis of the venous plexuses, with participation of the lateral sinus, and even thrombosis of the carotid artery and consecutive cerebral embolism. He cites cases in which the external tunic of the artery was infiltrated with tuberculous granulations, and admits the possibility of tuberculous meningitis having its origin in this way in bacillary otitis media.—*Archives of Otology.*

The Pulse in Clinical Surgery.

The *Revue Internationale de Medicine et de Chirurgie Practiques* for March 10th contains a review of a work by M. Francois Bertonnier on this subject. In this interesting work, says the writer, the author first recalls Marey's statement as follows: "The pulse is the sensation of sudden swelling felt by the finger which palpates an artery. The blood-vessel that allows itself to be depressed becomes suddenly hard each time that a systole of the heart increases the arterial tension." Bertonnier then considers this physiological phenomenon with regard to its frequency, its power and its rhythm. In two chapters he explains the connection between the pulse and the temperature, also the usefulness of examining the pulse in cases of severe hemorrhage. His principal conclusions are the following: 1. The discordance of the two curves, that of the temperature and that of the pulse, is often an indication of a serious condition. 2. In grave hemorrhage the great depression of the pulse that accompanies it has sufficed occasionally to indicate the true diagnosis. 3. In traumatic shock, or that following an operation the degree of slenderness, of frequency, and of irregularity of the pulse will be the most exact measure of the violence of the shock and of the patient's vital resistance. 4. In traumatic cranio-cerebral lesions extreme slowness of the pulse is a never-varying sign of concussion, of contusion, or cerebral compression. Eventually, its acceleration with elevation of temperature is a sign of meningo-encephalitis. 5. The pulse should often be a guide in surgical interference in traumatic or inflammatory affections of the abdomen. 6. The absence of arterial pulsation at the extremity of a member is a very important sign and calls for a prompt determination. Finally, the pulse, under the influence of chloroform, by its irregularity, intermittence, and arrhythmia, indicates, even better than auscultation of the heart, that the valvular lesions are badly compensated for, and that there is danger in the administration of chloroform.

OBSTETRICS.

Are the Uterine Ends of the Fallopian Tubes Ever Pervious When the Tubes Contains Pus?

Notwithstanding the recent emphatic declaration of one of our most noted gynecologists to the contrary, numerous cases in which tubes are pervious are being reported. Dr. T. J. Watkins, of Chicago, says that while separating the adhesions of a pus tube on the left side he noticed that the tumor suddenly decreased in size without rupture. Fully four drams of pus were forced out through the uterus into the vagina, over the vulva, and onto the operating table. He thinks that this case, however, could not have been relieved by curettement, drainage, massage or galvanism, because, first, the patient had an abscess of the opposite tube and ovary, and, second, because the walls of the left tube were so distended, adherent and thickened as to be incurable by any operation short of an abdominal section.

Dr. F. A. Glasgow, of St. Louis, practices dilating the cervix with sterilized elm tents in these cases saying, "We can gradually slip in tent after tent, first dipping them in glycerine or water for a moment, until the cervix is full. I now place a wad of cotton tied with a string just against the cervix; the tents are cut off to a length which will just permit them to entirely enter the os externum without pressing on the fundus; they have each a short string attached to them. This is kept up for a number of days, the patient being kept in bed. Sometimes the dilation causes pain; often none. If, when the uterine canal is large enough to admit the finger, there is no discharge of pus with relief of the symptoms, I anesthetize and curette. I now pack with gauze and repeat for a number of days. I cannot at present recall a case of tubal distention where I did not get some discharge after packing with gauze or dilating with tents for some time. Very often there is a very offensive watery discharge comes through the packing, even soaking into the bed. Every case is not permanently relieved."

Rectal Examination of Pregnant Women.

W. H. Beckman (*Shurnal akuocherstwa i Shenskich bolesnej*) has tried this method with great success in 100 parturient women, the details of pelvis and cervix being easily made out. The length of the pregnancy and state of the bladder could not be determined in 7 per cent. of the cases, and the fontanelles and sutures could not be felt in 28 per cent., but this was less important, since the position of the fœtus could easily be detected by external examination and especially by auscultation. It was always possible to distinguish the occipital from the frontal portion of the head. The advantage of rectal examination is that infection through the genitals is avoided, the only objection being that sometimes examination through the vagina may become necessary, and that infection may occur through the examining finger,

though the latter is easily disinfected, since the rectum does not contain specific microbes. The author considers rectal examination of great value to midwives, enabling them to determine if the presence of an obstetrician will be necessary. Zweifel's experience in the Leipzig obstetrical clinic showed that students instructed in this method of examination could determine all the necessary details without recourse to vaginal examination. Ries believes that midwives should be forbidden to make examinations through the vagina, as their duty is only to assist at normal births. Kroenig is inclined to permit vaginal examinations only (1) when it is difficult to determine through the rectum what part of the fœtus is presenting, (2) when the midwife is not able to bring about relaxation of the cervix, and (3) when the pains last more than two hours.

Vaginal Injections During Labor.

Hot sublimate or carbolic injections during labor shrivels and contracts the vaginal mucous membrane by contracting the capillaries, removes from it its natural lubricating secretion, thus largely augmenting the friction between the head and the vaginal walls, retarding the progress of labor and necessitating greater powers of expulsion.—*Charlotte Med. Jour.*

Viburnum Prunifolium in Abortion.

Mme. Michailowa (*Meditzinskoje Obozrenije*), after a trial in four cases, states that, contrary to the accepted opinion, this remedy not only does not always prevent abortion, but sometimes even occasions it or, at least, accelerates a miscarriage already commenced. The hæmostatic action of the drug (2 grains—0.12 gramme—in powders four times daily) was constantly observed, but in two cases, after the first day, contraction of the uterus followed, favoring the commenced abortion. In three cases, directly after the administration of a dose, contraction of the external os was observed. The author believes that, although viburnum may occupy a prominent place in the treatment of female diseases, it is not without danger in cases of threatened abortion.

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM APRIL 30, 1895, TO MAY 11, 1895.

Leave of absence for one month and fifteen days, to take effect on or about June 16, 1895, is granted Major William E. Waters, Surgeon, U. S. Army.

The extension of leave of absence on surgeon's certificate of disability, granted Major Washington Matthews, Surgeon, is further extended four months, on surgeon's certificate of disability.

The leave of absence on account of sickness granted Major Clarence Ewen, Assistant Surgeon, is extended three months on account of sickness.

Captain Louis W. Crampton, Assistant Surgeon, will report in person to the President of the Examining Board appointed to meet at Denver, Col., on May 14, 1895, for examination for promotion.

Captain Richard W. Johnson, Assistant Surgeon, is relieved from duty at Washington Barracks, D. C., and ordered to Fort Huachuca, Arizona, for duty, relieving Major Timothy E. Wilcox, Surgeon.

Major Wilcox on being thus relieved is ordered to Fort Schuyler, N. Y., for duty.

NEWS AND MISCELLANY.

Deer Park on the Crest of the Alleghenies.

To those contemplating a trip to the mountains in search of health and pleasure, Deer Park, on the crest of the Allegheny mountains, 3,000 feet above the sea level, offers such varied attractions as a delightful atmosphere during both day and night, pure water, smooth, winding roads through the mountains and valleys, and the most picturesque scenery in the Allegheny range. The hotel is equipped with all adjuncts conducive to the entertainment, pleasure and comfort of its guests.

The surrounding grounds, as well as the hotel, are lighted with electricity. Six miles distant, on the same mountain summit, is Oakland, the twin resort of Deer Park, and equally as well equipped for the entertainment and accommodations of its patrons. Both hotels are upon the main line of the Baltimore and Ohio Railroad, have the advantages of its splendid Vestibuled Limited Express trains between the East and West. Season excursion tickets, good for return passage until October 31, will be placed on sale at greatly reduced rates at all principal ticket offices throughout the country. One-way tickets, reading from St. Louis, Louisville, Cincinnati, Columbus, Chicago, and any point on the B. & O. system to Washington, Baltimore, Philadelphia or New York, or vice versa, are good to stop off at either Deer Park, Mountain Lake Park or Oakland, and the time limit will be extended by agents at either resort upon application, to recover the period of the holder's visit.

The season at these popular resorts commences June 22d.

For full information as to hotel rates, rooms, etc., address George D. DeShields, Manager, Deer Park, or Oakland, Garrett County, Md.

—4-t. CHAS. O. SCULL,
General Passenger Agent
B. & O. R. R.

THE
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ORIGINAL ARTICLES.

LEPROSY*

A. W. HITT, M.D., INDIA.

What we now recognize as separate and distinct diseases have been described by ancient writers under the term "Leprosy." We are indebted to the Bible for the oldest record of leprosy.

The Bible mentions a person as "a leper, white as snow." This case would not be classified to-day as a case of leprosy, but as *leucoderma*. On the other hand, the Bible gives a very good description of anesthetic or nerve leprosy, in the twelfth chapter of Leviticus.

Many prominent men have died with this loathsome disease. The Talmud says, "The Lord smote Pharoah, King of Egypt, with leprosy. The disease was exceedingly grievous and the King suffered inexpressible agony." In conversation with an intelligent Egyptian, who was well versed in the history of his country, I was told that Rameses IV. was the king referred to.

It was said that Moses had leprosy, and Manetho states that 90,000 leper Jews went out of Egypt with him. Josephus discredits the idea that Moses was thus afflicted.

I belive that Job at one time had leprosy. He speaks of scraping himself with a "potsherd," and says of his sufferings: "When I lie down I say, 'When shall I arise and the night be gone?'" And again, "I am full of tossing to and fro till the dawning of the day, and my flesh is clothed with worms and clouds of dust. My skin is broken and become loathsome." And of his friends, he says, "They abhor me and flee from me, and spare not to spit in my face."

King Uzziah and Naaman, the Syrian captain, also had this loathsome disease.

Robert Bruce, King of Scotland, died of leprosy in 1392.

I mention the above cases to show that it is not a disease limited to the poorer classes only. The rich suffer from it as well as the poor.

The ancients regarded Egypt and the valley of the Nile as the home of leprosy.

Isadore of Seville (A. D. 582) speaks of leprosy being in Spain. During the reign of Louis VIII. (1226 A. D.) there were 2,000 leper asylums in France, while the number of asylums in all Europe was estimated to be 19,000.

Twenty years before Columbus discovered America, there were 112 leper asylums in England.

MacNamara says a leper asylum was established in Canterbury, England, A. D., 1096. Segregation had almost driven it out of England.

Sir J. Y. Simpson gives an interesting account of how lepers were banished from London during the reign of Edward III.

*Read before the Tennessee State Medical Society, April, 1895.

The leper was looked upon as a dead man, and the church performed the solemn ceremonials of the dead over him on the day on which he was separated from his fellow creatures. He was from that time dead to law and legally buried, though still alive and breathing. The priest first went to the house and conducted a part of the ceremony. The leper was sprinkled with holy water and was then led to the church where he was clothed in a funeral pall, and while placed before the altar between two trestles, the Libera was sung and the mass for the dead was celebrated over him. He was then given a special dress, and a pair of clappers so that he could warn the people not to come near him.

This is quite a contrast to what I saw daily in India: men sitting by lepers, eating with them, and dipping up water to drink within a few feet of where lepers stood washing themselves and their dirty loin-cloths. A barber called at our house and after cutting a friend's hair asked me if I wanted to be shaved. I told him "No." He then asked for medicine and when I examined him, I found he had leprosy.

During my travels in various parts of the world, I have found leprosy in almost every place I have visited. I can safely say that no part of the world has escaped this dreadful scourge, save a few of the islands in the ocean. Even Iceland was included in the list as far back as any of our writers can remember. In 1652 a leper asylum was established in that country.

India, China, the Sandwich Islands, and the different districts of Africa suffer most from it.

Some people believe that there are 250,000 lepers in India, while MacNamara, who is one of the leading authorities on leprosy in India, says there are 128,089 in British India. There were 6,614 in the district in which I lived.

China is said to have almost as many lepers as India, but owing to so much of the country being closed to foreigners, it is next to impossible to get or give any correct information.

Dr. Hillerbrand, who has been practicing in the Sandwich Islands since 1851, says that there were doubtful cases as far back as 1848, but the first well-authenticated case was reported in 1859. It was introduced by the Chinese, and as there was no word for it in the Kanaka, the natives called it "Miapake," or Chinese disease. There is now one leper to every thirty healthy natives in these islands. The leper asylum on Molakai in 1890 had 1,159 lepers in it. There are now about 1,500 in this asylum.

Our own fair country has a fair sprinkling of it, there being 522 cases now in America. Only a few weeks since two lepers were discovered in the country above Cincinnati, Ohio.

For quite a long time two types of leprosy have been recognized: the tubercular and the nerve type (generally known as the anesthetic form), which when combined, form a third, known as the mixed type of leprosy. The same bacillus causes both forms.

If the bacillus finds a home and can develop in the corium, we will have as a result, *tubercular* leprosy; but if the bacillus does not attack the corium and reaches the nerves of the extremities and face, we find *nerve* or *anesthetic* leprosy. In other words, I believe that the type of the disease is determined by the channel through which the bacillus enters the body. Should it be deposited in the skin, especially in a weak place, and remain undisturbed, tubercular leprosy would follow.

SYMPTOMS.

Nerve or Anesthetic Leprosy.—Generally the patient has several feverish attacks and the whole constitution seems to be disturbed. This is not always the case, but, generally speaking, among the lower, ill-fed classes, this will hold good. The first symptom which attracts the attention of the patient is a tingling or burning sensation in patches on the different parts of the body. The backs of the hands and the fore-arms are generally the parts which are thus attacked.

Lancinating pains along the course of the nerves are next noticed, and the color of the integument changes. In some cases, it becomes darker; in others, the skin pigment is diminished and the part becomes lighter than the surrounding skin.

Pemphigoid eruptions are commonly noticed. An erythematous rash appears over the affected parts. The pimples vary in size from that of a lentil to a pea. These patches gradually fade and the

epidermis shows a tendency to desquamate after the drying up of the eruption. These spots spread peripherally and begin to fade first in the center. The complete cessation of perspiration from the surface of these spots is very important as a diagnostic point. Pilocarpine will not affect these spots. In some cases these spots are delayed and do not appear until after the disease has been in the system for ten years. The destruction of the nerves disturbs nutrition and the sense of feeling. Soon the most distressing part of the disease shows itself and the extremities and face are mutilated. The nose sinks in and leaves a ghastly looking patient whose face you can never forget. The fingers and toes become crooked and ankylosed. The phalanges either drop off or become absorbed and disappear in this way. The hair drops out in tubercular leprosy, while it becomes white in the anesthetic spots of nerve leprosy and does not always fall.

There is great pain about the eyes, nose, cheeks, mouth and limbs. After months or years of suffering, the pain ceases and anesthesia supervenes. An eye can be cut into at this stage without hurting the patient. The patient's health fails after years of suffering, and he becomes anemic, and visceral complications arise. Amyloid degeneration of the kidneys and liver, with chronic diarrhœa, finally put an end to his suffering and miserable existence.

Tubercular Leprosy—As in the anesthetic form, we find fever and a general breaking down of the constitution in the first stages of tubercular leprosy. When the disease is well advanced, the tubercular or nodular masses on the face, with the greasy, shining appearance, causes the patient to look simply frightful. This is the leonine appearance (leontiasis) as commonly noted by both ancient and modern writers.

If you will pardon me for mentioning elephantiasis here, I will say it seems strange that these two powerful and destructive diseases should be in appearance so much like the two most powerful and destructive animals of the country in which they prevail, that the name "leonasis" from the resemblance to the lion, and "elephantiasis" from the resemblance to the elephant, should be given them. Leprosy, like the king of beasts (the lion), is the king of diseases, and is the most destructive disease known, so far as mutilation is concerned. And as the immensity of the elephant, or, if you will pardon me for using the expression, this great exaggeration of animal life, impresses you on first seeing it, so the immensity or apparent exaggeration of the disease impresses one when he first sees a well developed case of elephantiasis.

Another point which to me is very interesting: Only a short distance from our place, is a town (Ruttenpore) which is noted for two things: first, the great number of cases of elephantiasis; and second, the large "tulahs" or artificial ponds. Ruttenpore was for centuries the capitol of this district, and the native kings or Rajahs had great herds of elephants here. The elephants were washed and bathed in these tanks daily, and the natives now say that every person who bathes in one of these tanks is sure to have elephantiasis; while in the neighboring tanks where no elephants were bathed, the water is pure. If you ask a native some distance from this place, if he has ever visited Ruttenpore, he will, as a rule, reply, "Yes;" and add, "*Ruttenpore admi ha thi pau ka mawfik*," (Ruttenpore men have feet or legs like the elephant). This is the natives' belief about the matter. I leave you to judge as to where there is any connection.

Thin says, "When the parasite has established itself in the skin, the first effect (before there are any changes observable to the eye) is to set free a poison, which produces more or less marked results in different individuals, causing the so-called prodromata or premonitory symptoms of leprosy. After a time the multiplication of the parasite causes a vaso-motor paralysis of the parts in which it grows, producing the exanthem of tubercular leprosy.

"The further development of the bacillus leads to direct changes in the corium itself, causing swelling, thickening, infiltration and discoloration, which vary according to the extent and rapidity with which it grows. This forms the so-called tubercular stage. The breaking down of connective tissue and the destruction of blood vessels produced by this excessive growth of bacilli, lead to ulceration—the ulcerative stage of tubercular leprosy. Finally comes a time, when in most cases, the bacillus leads to leprous deposits in the liver and spleen, and the patient becomes

exhausted by the constant discharge from the ulcers and by visceral complications, to which he eventually succumbs unless, in the meanwhile, he has been suffocated by the leprous growth in the larynx, or has died of some acute intercurrent malady."

PATHOLOGY AND BACTERIOLGY.

The Bacilli Lepræ have been found in the cells of almost all the tissues of the body in persons affected with leprosy, but it is in the cells of the diseased nerves and skin that the bacillus will be discovered in the greatest abundance.

In the early stages of nerve leprosy, the bacilli first grow within the cells forming the sheath of one or more of the nerves, most frequently the ulnar nerve.

The Lepra bacillus resembles that of tubercle; in length it is about one-half to three-fourths the diameter of a human blood corpuscle. The Lepra bacillus multiplies by fission. As it has not been found free in the blood, it is doubtful whether it will live outside the cell wall.

Danielssen and Boeck give a good account of the changes visible to the naked eye. The epidermis is found normal in a section of tubercle which has not softened, and from the slightly firm corium a little viscid fluid can be expressed. The cut surface is granular, yellowish white, and a substance having this color can be squeezed out of it. The subcutaneous tissue is infiltrated and thick, and a lardaceous mass, which is often gelatinous, adheres to the corium. The skin becomes gradually thickened, the tubercle very rarely extending to the subcutaneous tissue, which does not soften with the rest of the tubercle. The vessels and nerves in the diseased tissue become thickened but resume their normal condition on passing into healthy tissue.

About the only difference of consequence, pathologically, between the types of disease is that the nerves are affected in nerve leprosy and the skin in the tubercular leprosy.

DIET.

Almost every article of diet has been accused of causing leprosy. Mr. Jonathan Hutchinson believes that fish will cause it. Lepra bacilli have never been found in fish, either fresh or dried. I, therefore, cannot believe that fish alone will produce leprosy. But I will say I believe that a fish diet is often a very important factor in the causation of leprosy, by preparing the soil for the seed.

We know that there are many people in the United States who cannot eat fish or strawberries on account of the unpleasant skin eruption which they produce. We know that when the skin is diseased and broken, the Lepra bacillus will find it much easier to enter the human economy than if it were healthy and unbroken. It would be just as correct to say that a fish diet alone would cause it. Men who have itch are more likely to have leprosy than are healthy men, simply because the skin is broken.

In this connection it might be well to mention the fact that, while a fish diet will have little effect on leprosy, a mixed diet of fish and milk will cause the disease to increase and the ulcers to enlarge rapidly.

VACCINATION AND ITS RELATION TO LEPROSY.

I believe that leprosy is contagious as syphilis is contagious, that is, by inoculation in some way or other. The Lepra bacilli must be transferred from the infected to the healthy person. This, I believe, can be done in several ways.

I will speak first of a few cases in which the disease has been produced by inoculation.

1. A European Sister of Mercy, who was sent to Guiana, was infected by being pricked with the needle with which she was sewing lepers' clothes.

2. A European child free from taint, while playing with a native child who was a leper, saw him stick the blade of a pen-knife into the anæsthetic part of the leg without experiencing pain. The European child took the knife from the native and tried to experiment on himself, but of course suffered from it. He afterward became infected and died with leprosy.

3. Kenu, a condemned murderer in the Sandwich Islands, was given his choice by the Queen, of being inoculated with leper lymph or being hung on a certain day. He consented to be inoculated and this was done by Dr. Arning. Within two years he was a confirmed leper. He died with leprosy in about six years.

I believe it is an accepted fact that leprosy can be inoculated and that in this

way it has increased and will continue to increase at a fearful rate until *arm-to-arm* vaccination is abolished.

General arm-to-arm vaccination has been practiced in the Sandwich Islands for years. Within the last few years leprosy has made a fearful advance there, from the time when no one had leprosy (1858) to the present day, when we find one-thirtieth, and some say one-tenth of the population infected with it.

Two years after a general vaccination took place there in a district which had been remarkably free from leprosy, from fifty to sixty cases were found. Cook estimated that the population of these islands one hundred years ago, was about 400,000, to-day there are less than 18,000, fifteen hundred (1,500) of whom are now in one leper asylum.

The vaccinators in India are ignorant men and unable to diagnose a case of leprosy or skin disease of any kind if they should see it. They never examine the people, and vaccinate all they can corner or catch up. Lepers are often included in the first, and lymph is taken from their arms and healthy people vaccinated with it, as the following case will show:

A leper named Munorita, thirty-four years of age, residence Koth, near Ranikhet, has had leprosy twelve years. Was vaccinated *since* he had leprosy. He was examined when he was vaccinated. Others were vaccinated with the same knife before it was cleaned. Later on lymph was taken from his arm and others were vaccinated with it.

It is useless to take up more time with this sad story. I claim that leprosy is being spread by the lancet and can confirm what I say. Gentlemen, it is time for the physicians of these countries to call a halt before this curse reaches around the world and knocks at our own doors. If the profession will not take up the fight for right, who that can remains to do so?

The natives of India object to having their children vaccinated for two reasons: First, because they have seen so many of them die after the operation, while others were wrecked for life and would have been far better off in their graves. About 3,000,000 people were vaccinated in India last year, and God alone knows how many of those poor creatures will have leprosy or some other trouble later on.

There is another reason why they object to it, and that is because they say a child is to be born who will be their king, and who will free them from the hands of the English. The blood of this child will be as white as snow. The English in some way discovered their secret, they say, and commenced dipping into the arms of all the children to find the white-blooded child. If it is found, it will be put to death.

I believe vaccination is a blessing when carried on right, but it is surely a curse as now practiced in India and some other countries.

DURATION.

The average life of a man suffering with tubercular leprosy is about 9½ years, while with anesthetic leprosy they live about 18½ years after contracting the disease.

TREATMENT.

It would be impossible for me at this time, to speak of all the drugs that have been used in the treatment of leprosy. Chaulmoogra and Gurjun oils have been used by most every one who has anything to do with leprosy, but so far these oils have failed to cure. Arsenic is considered by some to be good. Danielssen used iodide of potassium for over 40 years in the treatment of leprosy, with a marked degree of success.

There are no two cases which we treat alike. Ten per cent. solution of pyrogallic acid painted over the anesthetic spot often does good and the anesthesia disappears. I pay very little attention to the ulcers other than to keep them clean, as I believe to heal them by a local application alone will do more harm than good. As in other diseases of this character, an alterative is indicated. As an alterative I generally use the elixir iodo-bromide of calcium compound (Tilden's), as the calcium salt is much better tolerated by the stomach and is prompter in its action.

If the ulcers are slow about healing, I generally pack them with equal parts of acetanilid and sulphate of quinine. Ichthyol has been used by some, but after trying the various remedies I think the treatment outlined will give better satisfaction than any other. We can heal ulcers, stop the most distressing symptom of the disease, mutilation, and place the patient in a fairly good condition.

AUSCULTATORY PERCUSSION AND ALLIED METHODS OF PHYSICAL DIAGNOSIS.*

Concluded from page 586.

A. L. BENEDICT, A.M., M.D., BUFFALO, N. Y.

EXPLANATION OF THE CHARTS.

The writer regrets that he could not have had the assistance of someone accustomed to draughting, but it seemed better to sacrifice the æsthetic appearance rather than to allow technical inaccuracies

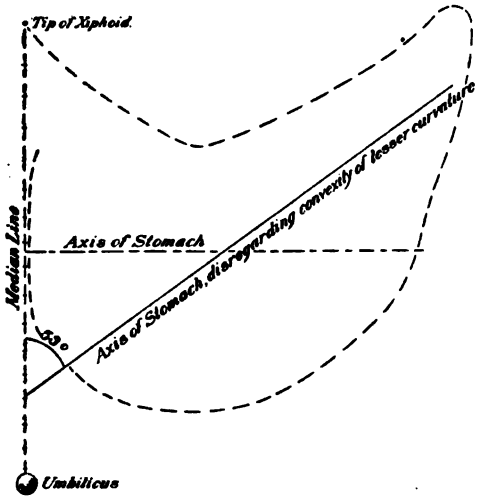

FIG. I.

to detract from the value of diagrams prepared by one unfamiliar with medical science. The charts were prepared by placing the original tracings on card-board, following the lines with a style and marking the depressions with ink, and then reduced to scale.

I. The patient was a large, flabby, middle-aged woman with chronic diffuse nephritis. She was subject to so much gastro-intestinal fermentation that her abdomen always suggested ascites, which was never found. The chart was made one hour P.C., when the stomach was distended nearly to its maximum capacity. The axis appears to be almost in the horizontal line but, for the purpose of comparison, we must allow for the distension of the lesser curvature. The gastric area, though absolutely one of the largest in the series, does not indicate the degree of dilatation and ptosis seen in Nos. 3, 5, 7 and 9, since it does not pass to the right of the median line nor within an inch and a-half of the level of the umbilicus.

II. This chart represents the contours of the stomach on two occasions, eleven days apart. The dotted lines indicate the result of the first examination, three hours P.C. For some reason, the upper part of

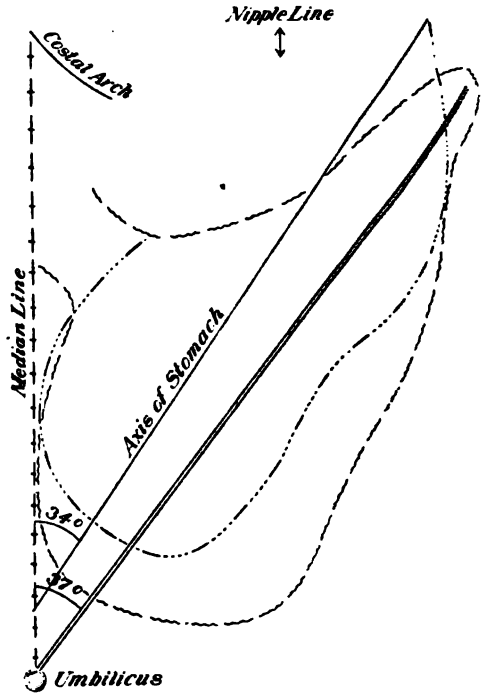

FIG. II.

the organ was not found. The second examination (marked in wavey lines) was made two hours P.C., when the stomach was

*Being the Merritt H. Cash Prize Essay of the Medical Society of the State of New York, 1895.

more distended. The patient was a remarkably long-chested individual, although only 5 feet 10½ inches tall. It will be seen that the distance from xiphoid to umbilicus was nearly two inches greater than in the first patient. The gastric

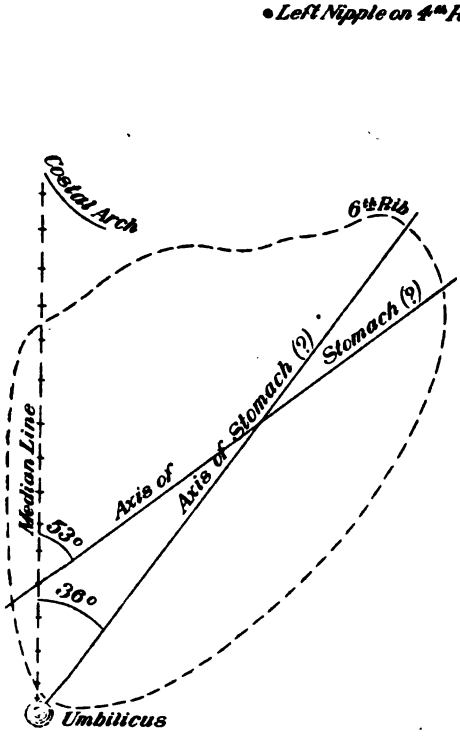

FIG. III.

axis, also, was nearly 20° farther from the horizontal. In each diagram, especially the first, is seen a tendency to the formation of two gastric compartments. Some have asserted that by auscultatory percussion the beginning of the duodenum can be located. The writer has frequently found a narrow projection from the right border of the gastric area, which, apparently, marked the duodenum. In this case, there seems to be a downward dilatation of the lower compartment of the stomach, since the duodenal projection, if such it be, usually appears not much above the lowest part of the greater curvature.

III. The patient had suffered for four or five days during a voyage, with gastro-enteritis. The symptoms had largely subsided without medical aid, though there was still tenderness over the abdomen, belching of gas and general gastro-intestinal distension. The stomach, though not sufficiently distended to inflate the lesser curvature, passed to the right of the median line and descended to the umbilicus, suggesting a very moderate and probably temporary dilatation. It is questionable which of the two axes drawn in the diagram represents more fairly the general direction of the stomach. The patient, though five feet eleven inches tall, was not "long-chested," and we should expect simply the average inclination of the stomach.

IV. This represents the stomach of a short and naturally broad-chested woman, though at present emaciated on account of fibroid phthisis. She is subject to occasional attacks of fermentation due to subacid dyspepsia. Although the stomach reaches farther to the right than is generally demonstrable, its area is not abnormal. The diagram is introduced, partly to illustrate the inclination of the axis, but more particularly to show the difference between the area as mapped out by auscultatory percussion and by auscultation of the tuning-fork vibrations. The dotted lines represent the area as determined by the latter method which seems

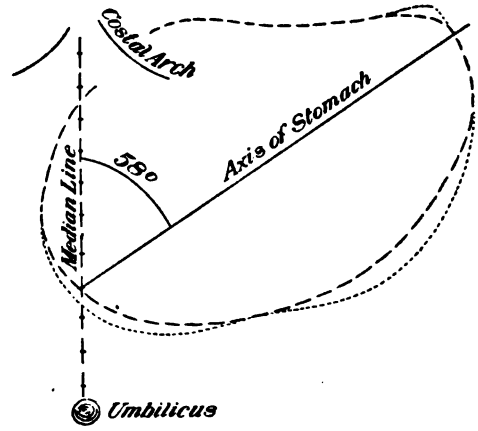

FIG. IV.

to be slightly more delicate. Where the dotted lines are absent, the two areas coincided.

V. This was a case of subacute gastritis, which, from its occurrence during an epi-

demic of typhoid fever and, on account of diarrhœa and a rise of temperature to 102.2°, occasioned considerable anxiety. The patient was a young man of average

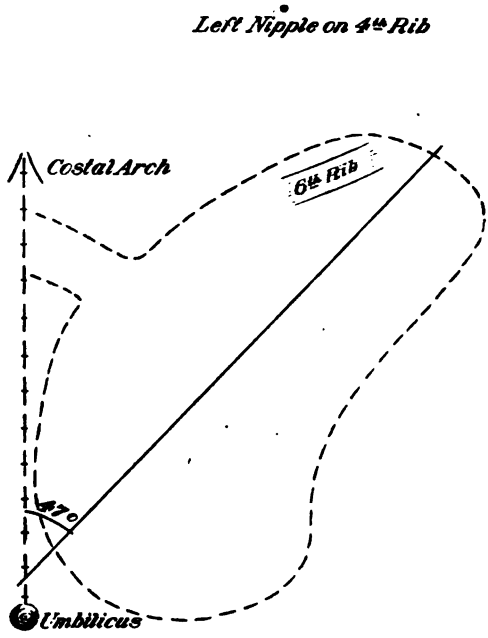

FIG. V.

height, rather stockily built. The inclination of the axis of the stomach is a little greater than in a person of average build. Like that of Case II., this map in-

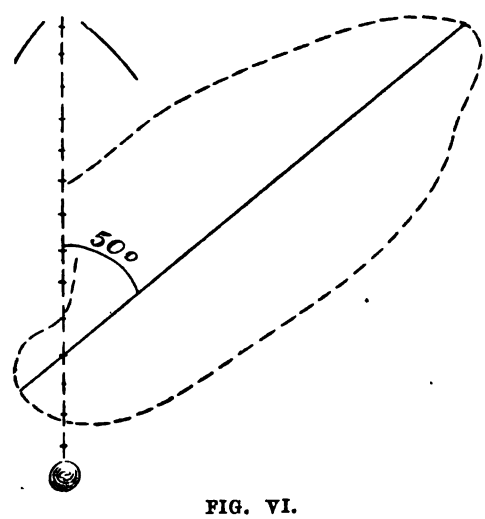

FIG. VI.

dicates a partial constriction of the stomach into two compartments, the duodenum being apparently high as if from a downward dilatation of the lower compartment. The chart was made in the morning, twelve hours after a meal.

VI. This map made two hours after eat-

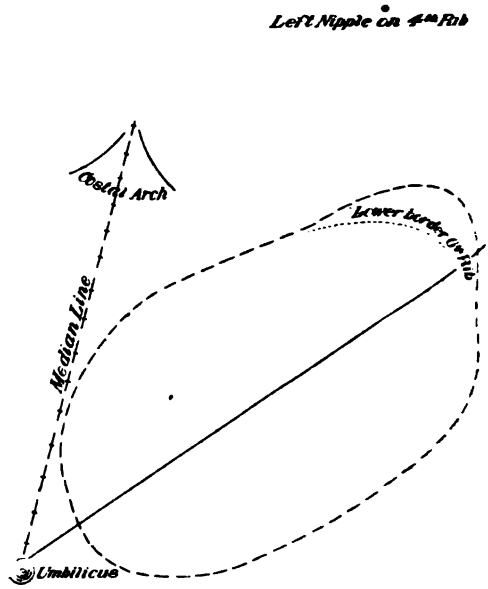

FIG. VII.

ing, represents the stomach of a nurse, aged forty, who suffered greatly from subacid and fermentative dyspepsia, appar-

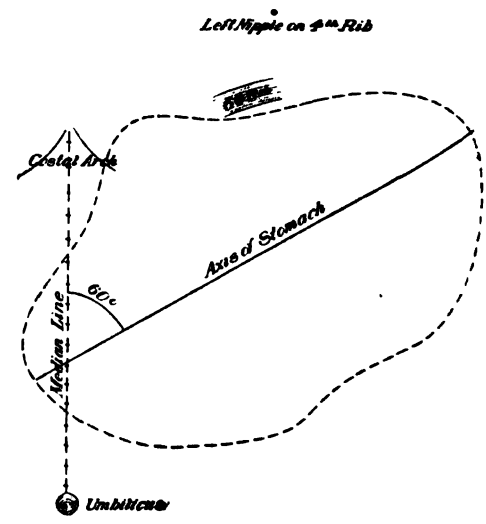

FIG. VIII.

ently induced by fatigue. She was of large frame and broad-chested. The beginning of the duodenum appears in the usual location. The tuning-fork was used in making this map.

VII. This represents the stomach of a young man in the first week of typhoid fever. Although no food had been taken for sixteen hours (this was at the first visit) the organ was greatly distended with gas. It will be seen, however, that there was no essential dilatation. During the course of the examination, a gurgling was heard at the pylorus and it was found that the superior convexity of the stomach had descended as indicated by the dotted line.

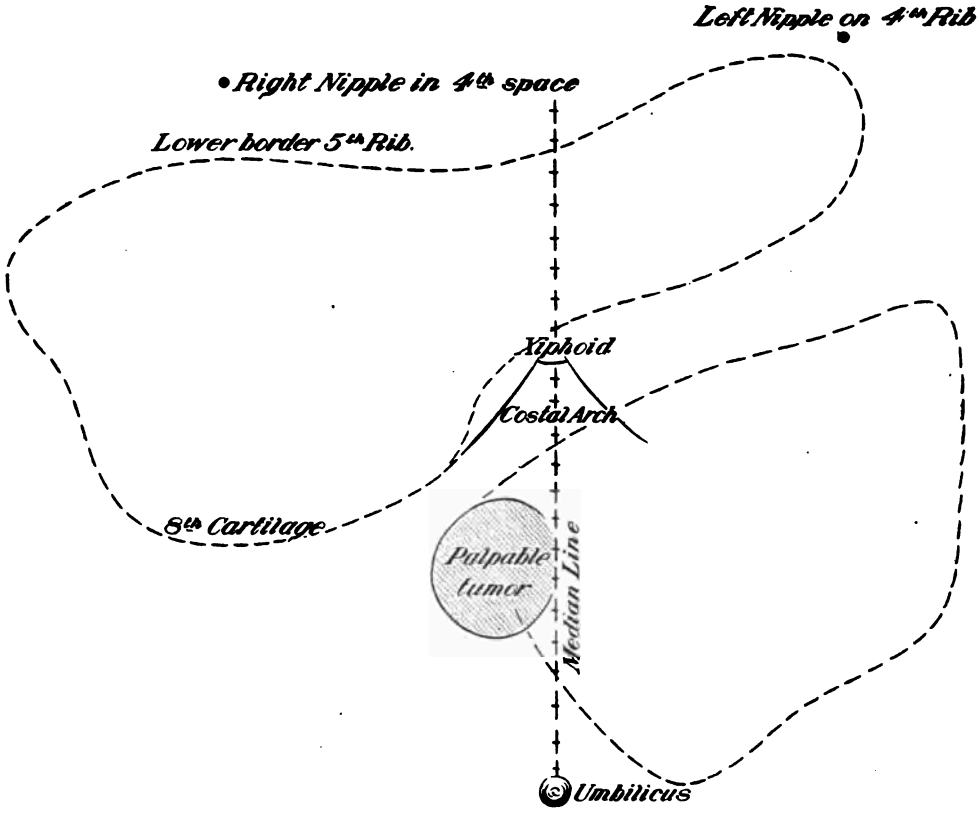

FIG. IX.

VIII. This was a case of dilatation seen in consultation. The map was made three hours and a half P. C. and, although corroborative of dilatation, it would not suffice to establish the diagnosis without confirmatory evidence.

IX. The case was one of pyloric cancer complicated with hepatic cirrhosis. The patient had been some hours without food, so that the stomach was relatively contracted, yet it was evident that secondary dilatation had occurred. The condition is plain from the diagram. It will be noticed that the nipples are not on a level, although care was taken to have the arms symmetrically disposed, so as to prevent stretching of the skin.

X. This was an extremely interesting case of hepatic carcinoma. Not having seen the patient during life, an excellent opportunity was afforded for testing the reliability of auscultatory percussion. Long pins were driven through the tissues at the limits of the area of resonance. (It will be noted that the word resonance has not the same sense as when used of ordinary percussion.) A piece of paper was then applied to the body, being punctured by the heads of the pins. The outer limit of the left lobe, falling over the 6th rib, could not be marked by a pin but it was verified by the section. The right lobe was correctly outlined, the left extended a little higher than the pin-marks. Depending from the liver was a cancerous mass which had been overlooked. On account of rigor mortis and gaseous distension of the stomach and bowels, it was neither palpable nor percussible. So far

from indicating a failure of auscultatory percussion, this test simply illustrates its physical limitations, since it shows that vibrations imparted to an organ are practically limited to tissues of the same kind. In other words, the cancerous mass, though growing from the liver, was a separate "pathological unit."

At another autopsy, the attempt to locate the liver was a failure. The subject had been dead four days and decomposition had engendered an enormous amount of gas. Being unable to trace the liver beyond the median line by auscultatory percussion, the stethoscope was moved to the left. What was supposed to be the upper margin of the left lobe was then marked, but on account of the inflation of the stomach, the lower margin could not be found. The section showed that the right lobe had been fairly well located, the left lobe was almost wanting, the liver being extremely contracted. The line marked as the upper margin of the liver corresponded to the lower margin of the lungs. In moving the stethoscope one of the rules of auscultatory percussion had been infringed, for it had been transferred from the area in which the liver was superficial to the area of the inflated stomach, which had exceeded its normal bounds. The failure, therefore, in spite of the unfavorable circumstances, was attributable not to the method but to a blunder in carrying it into execution. It is difficult to learn the lesson that in physical examinations we must trust blindly to our senses, not to previously formed conceptions nor to the probabilities of the case. Afterward, any discrepancies are to be carefully weighed and the decision made accordingly. The writer, in the present instance, was really making an accurate map of the liver when he thought himself failing, and by following the notion that the left lobe was present to a demonstrable extent, the error was made of mapping out part of the stomach under the delusion that it was part of the liver.

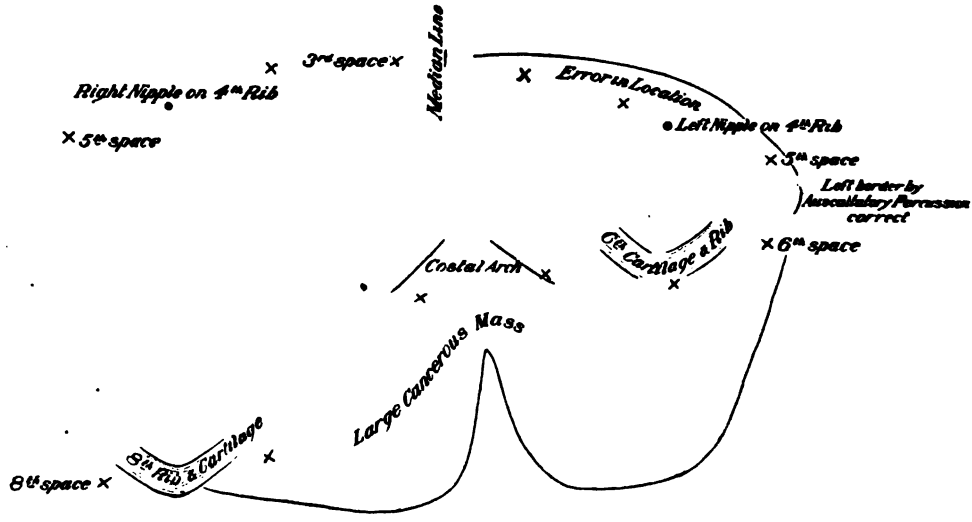

FIG. X.

Hemorrhoids.

Tuttle advises:

(1) Astringent ointment:

Ung belladona.....	āā 3 i
Ung stramon..... ...	
Ung ac tannic.....	

(2) Injection for internal piles:

Ac carbolici.....	3 iss
Ac salicyl.....	3 ss
Sodii bibor.....	3 i
Glycerine.....	ad 3 i

Sig. Inject not more than 4 drops and exercise care as to antisepsis.

—*Matthews' Medical Quarterly.*

A Large Gall-Stone.

Dr. T. A. McGraw reports in the Medical Age a case of intestinal obstruction which was found on operation to be caused by a gall-stone completely filling the lumen of the intestine, at the junction of the jejunum and ileum. The calculus weighed 250 grains.

EMPYEMA OF THE MASTOID AND ITS RELATION TO ACUTE AURAL DISEASE.*

S. M'CUEN SMITH,† M.D., PHILADELPHIA, PA.

The importance of the subject is manifestly so great and its field so extensive, that anything like an exhaustive consideration of this interesting disease would not be possible within the limits and sphere of this brief paper. I will, therefore, confine my remarks to those cases of mastoid empyema that result as a complication of, or an extension from an acute suppurative inflammation of the middle ear.

Former teachings as to the etiology of this disease would lead us to believe that mastoid abscess, when the result of aural disease, arises only from a chronic suppurative inflammation of the middle ear, and that it rarely if ever occurs as a complication of an acute discharging ear. When we consider the destructive action to the superficial tissues and the underlying bone caused by the long-continued presence of fetid and bacteria-laden pus, we are justified in the plausible theory that empyema of the mastoid should occur only in the chronic form of suppurative otitis media, as considerable time usually elapses before carious involvement can reasonably be expected to have taken place. This explanation probably accounts for the prevalent belief that the otorrhœa must have existed for a longer or shorter period before the danger of mastoid complication arises.

It is not necessary, however, that the integrity of the mucosa lining the tympanum and the mastoid antrum should be seriously impaired, in order that the inflammatory products may find their way from the former cavity into the latter. Empyema of the mastoid as a result of an acute aural disease, may be caused by direct continuity of structure; or the infectious matter may be conveyed by the venous circulation to the mastoid or other parts of the cranial cavity. Likewise the canaliculi, through which pass the nutrient vessels from the carotid canal to the mucous membrane of the tympanic cavity, may become the carriers of the microbes of otorrhœa, and thus cause sinus thrombosis, arteritis, lymphangitis or phlebitis of the venous plexuses.

In a paper read before this society one year ago, I took occasion to call the attention of its members to the importance of the *early recognition* and *prompt treatment* of all *acute* inflammatory conditions of the ear, and I can offer no better suggestion at this time than to repeat this appeal, and at the same time remind you of the grave responsibility that rests with every practitioner of medicine who would neglect such an important duty. This obligation of the physician becomes especially imperative from the fact that if the initial lesion receives prompt and proper care, these serious complications now so prevalent will be reduced to a minimum. I might even predict that they would eventually be confined to some most unusual cause, or occur as the result of trauma.

Within the past few months I have seen eleven cases of mastoid empyema, all resulting from an acute otitis media. The time that elapsed between the beginning of the middle ear disease and the establishment of the mastoid implication, varied from three to seven weeks. The ages of the patients ranged from nine months to forty-four years; not any of this number ever suffered from a previous ear disease. In four of these patients, the abscess was superficial; of the remaining seven, five were confined to the mastoid antrum, while two involved the mastoid cells as well. In four of this number, the pus burrowed its way from the antrum out through the thick plate of bone and was deposited beneath the periosteum, so that a Wilde's incision was all that was necessary to establish a free communication between the external auditory canal and the spontaneous opening into the antrum. In not one of these four cases, had the aural disease been present for a longer period than six weeks, and in each case (all being adults) we were assured that at

* Read before the Pennsylvania State Medical Society at Chambersburg, Pa., May, 1895.

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no previous time had they suffered from any aural disease.

It is indeed remarkable to note the destruction that took place here, not only to the soft parts, but to the dense osseous structure as well, in the brief space of six weeks or less; furthermore, it is even more interesting, and at the same time much more difficult to explain why the confined pus burrowed its way out through the thick external plate of bone, instead of selecting the thin osseous walls that separate the mastoid and the middle ear cavities from the interior of the skull, where considerably less resistance would have been encountered.

The following interesting case will serve to illustrate the foregoing observations:

M. K., a resident of Philadelphia, began to suffer from an ear-ache on February 7th last, which he thinks came from "catching cold." He was treated for "neuralgia in the right ear" until February 22nd (a period of fifteen days), when the ear began to discharge. He was then informed that he was suffering from an abscess. The discharge continued until the 5th of March, at which time it ceased, and he was pronounced well, although the pain in his head was constantly growing worse. On March 12th the severe pain was again somewhat relieved by a free escape of pus from the tympanum. About this time a swelling appeared behind the ear, which was treated by blood-letting, blisters, etc., until the 21st of March, when the swelling over the mastoid decreased somewhat in size, and the pain grew materially less. He came under the writer's notice on the 2nd day of April, when an immediate operation was advised. Under general anesthesia the Wilde's incision was made. This not only evacuated a large quantity of pus, but revealed an opening into the mastoid antrum about the size of a ten cent piece which communicated freely with the tympanic cavity and external auditory canal.

The after treatment consisted in thorough irrigation with a hot antiseptic solution, and keeping the wound packed with iodoform gauze (renewing the same every day) until all evidence of pus had disappeared and the wound healed from the bottom. The patient made an uninterrupted recovery. Within four weeks after the operation the wound had entirely healed, and his hearing power had become quite normal.

Several points are worthy of note in the above patient, which are applicable to nearly all similar cases: 1st. In all probability, the disease would never have progressed further than an acute tympanic abscess if the presence of pus within the middle ear had been primarily recognized and immediate steps taken for its proper evacuation. 2nd. When the pus made its appearance by bursting through the membrana tympani, and the pain over the head continued to be severe, the serious character of the disease present should have been immediately recognized. 3rd. This, and many other cases that we could quote, demonstrates conclusively, that serious mastoid complications can, and often do develop from an *acute* inflammation of the middle ear. 4th. That the early recognition and prompt treatment of all acute diseases of the ear will usually result not only in their speedy cure, but such serious complications as above narrated will be most uncommon.

Psoriasis.

Amonii carbonatis.....	gr iv
Potassi acetatis.....	gr xxv
Liquor arsenicalis.....	m iv
Syrupi aurantii floris.....	ʒ ii
Aq menthae piperitae ad.....	ʒ ss

Misci et fit mistura.

Sig. A tablespoonful in half a wine glass of water 3 times daily after meals.

—*Practitioner.*

Hemoptysis.

Bloschko gives:

Gallic accid	ää 1 part
Ergotin.....	
Distilled water	ää 25 parts
Syrup althea.....	

Sig. Teaspoonful every 2 hours.

A New Treatment of Whooping-Cough.

Lyon Medical publishes an abstract of an article from *Medecine Moderne*, in which M. de Chateaubourg describes a new treatment of whooping-cough, which consists in injecting, subcutaneously, two cubic centimetres and a half of a ten per cent. solution of guaiacol and eucalyptol in sterilized oil. After the third injection the fits of coughing diminish noticeably, the appetite returns, and, as the vomiting rapidly ceases and the general condition begins to feel the good effects of the treatment, the whooping-cough disappears at the same time. The author reported five cases.

A CASE OF PNEUMONIA TERMINATING IN ABSCESS OF THE LUNG.

CLARA T. DERCUM, M.D., PHILADELPHIA, PA.

E. S., American, of German parentage, aged eighteen, a large, well-developed, robust lad, went to bed on the evening of February 2, 1892, apparently in perfect health. At four o'clock the following morning he was seized with a chill so severe in character as to shake the bed. Simultaneously with the occurrence of the chill, an agonizing pain was felt on the right side posteriorly, somewhat below the angle of the scapula. After the subsidence of the chill he succeeded in arousing his mother, who was sleeping in an adjoining room, and implored her to give him some relief. All her efforts in this direction proved fruitless and as soon as the day broke I was sent for.

When seen his condition was as follows: Respirations forty-eight per minute and extremely shallow; pulse 180 per minute, tense and full; temperature 105° F. On auscultation the crepitant *râle* and broncho-vesicular breathing were heard at the base of the lower lobe of the right lung. Frank pneumonia was diagnosed. The chest was enveloped in a cotton jacket and two and a half minims of the tincture of aconite in spirits of menderismus and neutral mixture, was given every two hours. The worst feature of the case, however, was the intense pain very soon complained of in the lower part of the chest and the upper part of the abdomen on the right side, which made it probable that the pleura covering the base of the lung immediately over the diaphragm was involved. The respiration, in consequence, were very shallow from the fixation of that muscle. Hot applications, dry or moist, had no effect whatever on the pain, and he moaned incessantly for several days. The pneumonia seemed to be limited to the base and the posterior part of the right lower lobe, the breathing anteriorly being clear and vesicular.

February 4th his pulse was 160, respiration 50 and temperature 105°F. February 5th the pulse was 120, soft and weak. Rusty-colored sputum now made its appearance and was expectorated very freely for about a week.

The following treatment was instituted: Whiskey, half-ounce every two hours; ten drops of the tincture of digitalis, one-thirtieth of a grain of strychnine and five grains of carbonate of ammonia were given every four hours; one grain of the aqueous extract of opium was occasionally given by suppository on account of the intense pain present; milk and broths were given *ad libitum*.

His temperature varied from 104° to 105°F; his pulse from 115 to 120, and his respirations from 40 to 50 per minute until February 12th, when his temperature suddenly fell to 99°. Instead of remaining at this point, it again rose in the evening to 100°, and kept rising daily morning and night, so that by February 28th it had reached 102° in the morning and 104° in the evening. His respirations now varied from 30 to 40, and his pulse from 110 to 120 per minute.

During the second week of the disease, the pain being still very severe, small doses of salol and phenacetine were tried without effect. This pain continued well into the third week, when it gradually began to disappear. On the fourteenth of February, pain began in the left arm, and pressure over the median nerve elicited marked pain. Iodine was painted along the course of the nerve. A little later the same pain commenced in the right arm, and soon pain showed itself in both legs and feet, the soles of the feet being so sensitive that even the slightest touch seemed to cause excruciating pain. However, the pains began gradually to ameliorate, and entirely disappeared by February 28th.

As before mentioned, cough commenced on February 5th, when rusty sputum was expectorated. This continued for one week when it ceased. On February 29th at about 10 A. M., slight coughing commenced and continued throughout the day. It was dry in char-

acter. About 5 P. M. of the same day, blood, mucus and pus suddenly began to well up in mouthfulls, and about 7 P. M. fully one pint of this material had been expectorated. His temperature now registered 102.5°F.; respirations were 34 and pulse 120 per minute. This paroxysmal coughing was followed by extreme exhaustion. These attacks occurred almost daily, and considerable quantities of pus and debris were expectorated in variable amounts. Expectoration continued until April 5th, when it ceased. However, it recommenced slightly on April 25th and continued until the middle of May.

The temperature from February 29th, until March 4th, varied from 100° to 102.5° F. It then increased daily, so that on March 14th, the evening temperature was again 104°. It now gradually declined until March 20th, when it registered 99° and remained so for several days. It then gradually rose again, so that on March 27th, the evening temperature was 102.5°. It henceforth slowly declined to the normal, which was reached on April 5th, and so continued during the remainder of the illness.

The lung had been examined from time to time and the following physical signs were noted: February 15th, there was bronchial breathing to the angle of the scapula, with flatness on percussion by February 20th, this conditions had advanced over the whole posterior portion of the lung, and extended a little beyond the axillary line anteriorly; here the breathing became vesicular in character and was so over the whole anterior part of the lung. There was entire absence of vocal fremitus at the base of the lung posteriorly. On the twenty-seventh of February a vesicular element was discovered at the lowest portion of the lung. This gradually extended upwards daily, and by March 15th, could be heard above the angle of the scapula. April 1st, distant vesicular breathing could be heard all over the posterior part of the lung. Vocal fremitus had now returned.

April 3rd, a small abscess that had found on the sacrum over a bed sore was opened and found to lead by a fistulous tract to a large abscess in the right buttock, which discharged over a pint of pus. Although this abscess was packed and treated antiseptically it discharged for fully six weeks.

The retentive powers of the boy's stomach were marked; he never vomited either food or medicine throughout the whole course of his illness, and his appetite was simply voracious. After the first two weeks of his illness he was given meat, eggs, broths, oysters, vegetables and easily assimilated food of all kinds.

During the latter part of the disease, quinine, potassium, iodine and strychnine were the drugs used. Whiskey was freely used in variable quantities throughout his illness. After the expectoration of pus commenced, inhalations of creosote and oil of eucalyptus were used several times daily in a steam atomizer, which was also kept going in the room constantly so that the atmosphere became impregnated with the drugs. This was done at the suggestion of Dr. H. C. Wood, who saw the lad in consultation after the rupture of the abscess.

In looking over the literature of the subject I find that several cases of abscess of the lung following pneumonia have been reported. In one case, although the abscess had ruptured into a bronchial tube, an incision was made and the abscess drained externally. This was followed by an empyema, which had to be drained also, nevertheless the patient, a lad of fourteen years, made a good recovery (Hawkins, *Trans. Clin. Soc.* London, xxiv, 1891).

Another case of double pneumonia in a man fifty years of age, with chronic Bright's disease was followed by an abscess which ruptured into a bronchial tube. Recovery followed, after an illness of several months, without external drainage (Lewis, *St. Louis Med. Review*, 1889).

Another case, which is of interest because the abscess ruptured externally, occurred in a little girl, eight years of age. The abscess pointed one and one-half inches below the right nipple, and ruptured spontaneously nearly two and a-half months after the beginning of the pneumonia. Antiseptic dressings were used over the opening which admitted air freely, nevertheless, this case was also followed by recovery (Edson, *Med. Record*, xxxiv., 1888).

My patient is now in the enjoyment of the most robust health. For a long time there was a marked flattening of the right side of the chest, but at present there is no difference between the two sides.

HYDROCEPHALUS; ASPIRATION OF LATERAL VENTRICLE; EXCISION OF THE THYROID.*

ROSWELL PARK,† A.M., M.D., BUFFALO, N. Y.

Our patient is a little child of three. It is the first born of its parents. During labor, which occupied forty-eight hours, forceps were used and when the child was finally born, there was a "gathering" on the right frontal region at the junction of the forehead and scalp. This discharged for about three weeks. The child was breast-fed and was weaned at the expiration of a year. When two years old he had a convulsion and he had two or three every day for a month. He would lie quietly and shake his right hand. The duration of the attacks was from two to five minutes. The intervals gradually became longer but the convulsions became more severe. The convulsions were not connected with teething. The bowels and bladder are normal in function, the child can utter only two or three words, though he understands perfectly what is said to him"—probably a mother's exaggeration. A second child has been born that is perfectly healthy.

A few weeks ago, I operated upon this child for a combination of hernia and hydrocele and at that time, I called your attention to the irregularity of the skull. With the head shaved preparatory to operation, the irregularity is still more marked. We have made a plaster cast of the head for reference after the operation. The child is not a driveling idiot but is an imbecile. It takes an interest in what is going on and plays a little, but it has every now and then a convulsive twitching and rigidity of the hand and arm. Without any urging on my part, the parents have asked to have something done for the relief of its present deplorable condition, and have expressed themselves as willing to abide by the result, whatever may be.

I shall try to find out whether this irregularity of the skull is due to thickening, which I do not believe, or whether there is a cyst, either extra or intra-dural, or whether there is a dilatation of the ventricle on one side or both. This last I regard as the most probable condition. The case is evidently not one of micro-cephalus and the opposite condition or enlargement of the skull is most often due to hydrocephalus, which usually means a dilatation of the lateral ventricle. Unilateral hydrocephalus is rare. When we consider that instruments were used at the delivery and that the child was injured about the head, it is possible that there may have been a hemorrhage somewhere inside of the skull and that the blood-clot, instead of being absorbed, has undergone cystic degeneration.

The head has been shaved and scrubbed and enveloped in an antiseptic dressing which has been kept on forty-eight hours. Prior to operation, the head is again scrubbed with green soap and mustard, and then with a mixture of alcohol and ether to remove fatty debris from the skin. The Esmarch bandage is applied around the forehead to prevent loss of blood during the operation.

My first attempt, after penetrating the skull, will be to ascertain the condition of the lateral ventricle on the protruding side of the head, that is, the left. It has been shown that the lateral ventricle may be safely reached, and the anatomical directions for finding it in adults have been plainly given by Keen of Philadelphia. An opening is made, one to one-quarter inches behind and one to one-quarter inches above the external auditory meatus. Then, introducing an aspirator needle, or a grooved-director, it is directed to a point two inches above the opposite auditory meatus. This will tap a distended ventricle and will do no damage to the intervening structures. The normal ventricle in the adult is reached at a distance of about two to one-quarter inches; if it be dilated, it will be tapped at a less distance. In the case of this child, although the skull is relatively large, I have modified the distances. The trephine is located three-quarters of an inch behind and above the auditory meatus.

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†Professor of Surgery, University of Buffalo.

I will make the skin flap large enough to suffice for further interference, if necessary. The periosteum is separated from the left parietal bone by a crucial incision. As there is usually no diploë in a child of this age, we shall penetrate the skull very speedily, and extreme care is necessary to avoid damaging the parts beneath. On exposing the dura, there is no extreme brain tension. I mark the point toward which the needle is to be directed with my finger. There is a large vein running across the dura, almost in the middle of the trephine opening. This, of course, must be avoided. On introducing the needle to a depth of one-half an inch perfectly clear serum exudes. This shows that the conjecture of distended ventricle was correct. But the mere withdrawal of this fluid will not effect a cure, we must provide drainage. I make a larger opening in the dura and now the fluid drips out. I shall make use of an instrument originally devised to dilate sinuses, to push a rubber drainage tube through the brain tissue. Even the slight dilatation of the needle track caused by the slender blades of this instrument allows the fluid to flow freely. At first, it was blood-stained but now it is clear. The impetus of the heart-beat is seen in its rythmic flow. If the fluid were allowed to drain away too fast, the sudden change in intra-cranial tension would produce shock. I will, accordingly, catch the tube with hemostatic forceps. It is stated in the American Text-Book of Surgery that there is no case on record of permanent recovery from this operation, but from other reading, I think I am in a position to contradict this statement, although recovery may not have occurred after cases treated as deliberately as this one. In all, about a hundred cubic centimeters of fluid have drained away from this ventricle. The other wound is closed with catgut, leaving space for the drainage-tube. The usual antiseptic dressing is applied.

This child died a few weeks latter of sheer inanition, without the slightest sign of sepsis, nor reason for attributing death to the operation.

EXCISION OF THE THYROID.

Ten days ago you saw me operate on a little girl, aged twelve, who had a large thyroidal tumor which pressed on the trachea, displacing it to the left and compressing it into a scabbard shape, the anterior edge presenting. The normal relation of the parts was so much altered that the operation was an extremely difficult one. At one time it seemed doubtful whether the child would rally, and artificial respiration had to be resorted to. Had it not been for the precaution of first performing tracheotomy and leaving long sutures hanging from the trachea, so that it could be pulled into place whenever necessary, I believe the child's life would have been lost. The trachea was covered to such a depth by the tumor, that it was not possible to remove the tumor and then expose the trachea at our leisure, but it was necessary to tear the tumor apart in order to expose the trachea without delay. The condition of the patient was such that, after having provided for easy respiration, it was decided to postpone the extirpation of the tumor. The silk threads which were left in place have rendered good service, for once or twice the tube has slipped out of place and breathing has been interfered with. During the last two or three days, the presence of the tube has caused some irritation of the margins of the wound.

Yesterday, I extirpated the tumor which was the original cause of the trouble. You will see that it is a large mass for a small child's neck. It is not the ordinary form of goitre, which is either a fibrous hyperplasia or a fibro-cystic degeneration of the thyroid body. This tumor is a hypertrophy of the whole thyroid body and is not very different from the normal structure of the organ, although it looks in some respects more like the thymus. The lobular structure of the thyroid extended in every direction. The upper limits were above the hyoid on either side; downward it extended behind the sternum at least an inch below the junction of the sternum and clavicle. It wrapped itself around the trachea and separated the trachea from the œsophagus. To-day, the child is in good condition and I have every reason for expecting her to recover.

The question now arises, what will be the effect of removing the whole thyroid body? This brings up the subject of the physiological function of the thyroid and, in this connection, notice that I call it a body and not a gland. Having no duct,

it is not entitled to the designation "gland" as are the ordinary secretory and excretory organs of the system, and I prefer to call the thyroid, thymus, suprarenals and prostate "bodies," since that word implies nothing as to their function and commits me to no theory as to their action in the economy. The peculiar tissue of the thyroid has properties some of which are known and some of which are unknown. In spite of the great amount of research as to the functions of the thyroid body, we can only say at present that its cells either remove from the blood—and perhaps from the lymph—some effete matter, or else that they elaborate some material that is necessary for the proper working of the body. Whether the purpose of the thyroid be formative or eliminative, I do not think we positively know. It is possible that both functions coëxist. We do know that, obscure as is its function, the thyroid is essential to perfect health and that various unpleasant sequences result from its total removal. We can experimentally remove the thyroid from a kitten, or sometimes a mature cat will survive the operation, and after three or four days the animal will show signs of intoxication, and will die in the course of a few days more, with symptoms of that disease which neurologists have called "tetany" and which is marked by spasmodic contractions of the muscles, by loss of true consciousness and by cerebral excitement. Similar cases are known in children and have occurred in adults. The consequences of total removal of the throid do not seem to be always the same in the human being. Sometimes a cretanoid condition results—as after experimentation on animals—do not understand me to refer to the specific infectious disease. Sometimes myxœdema results; sometimes the changes are not so much physical as mental, and a failure of intellect may develop which imitates cretinism, which is a congenital idiocy associated with goitre.

No one can foresee in any particular case just what will be the consequence of total extirpation of the thyroid body. The practical deduction, however, is that it is wise to leave a little thyroid tissue in place, unless there be malignant disease which demands its total extirpation at all hazards, and may call for the removal of much of the surrounding tissue as well as that of the thyroid. In the present case, the enlargement was of a benign nature, though you can seen how nearly fatal even a benign tumor may become from its interference with vital processes.

In operating on such cases, we have to decide between removing too much tissue, and of performing an incomplete operation which may call for a second interference by the surgeon at a later time. Accordingly, experiments have been tried on animals to determine approximately how much of the thyroid tissue may be removed without danger of serious after effects. From a large number of observations, the conclusion has been reached that we may prevent tetany and the other manifestations of poisoning by leaving in place about one-seventh of the entire organ.

This specimen shows little prolongations of the structure of the organ and I have every reason to believe that there have been left behind little islands of thyroid tissue sufficient to obviate serious trouble. However, if it be shown that an insufficient amount of the thyroid remains in place to perform its normal function, we have recently learned that we can atone for its loss by administering the thyroid of animals internally. We can employ the fresh thyroid or various extracts and dessicated preparations. Judging from this observation, it would seem that the thyroid is not an eliminating body, but that it supplies something necessary for the continuance of the vital processes. In a sense, therefore, the thyroid may be regarded as a secreting body or gland.

This patient made a prompt and and uninterrupted recovery.

Colic.

Asafœtidæ.....	gr. ij
Ferri sulph. exsic.....	gr. j

Sig. One to five as required.

—*Ex.*

Burns on Children.

The burns are first washed with a solution of boric acid; then the following mixture is applied with pads of absorbent gauze:

Aquæ calcis.....	ʒ ii
Olei lini	ʒ ii
Thymoli.....	gr. i

M. This is replaced in about ten days by an ointment of:

Acidi borici.....	ʒ i
Bismuth subnitratis.....	ʒ ii
Olei olivæ.....	ʒ iv
Lanolini.....	ʒ xiv

M.

—*Ex.*

A FATAL CASE OF TYPHOID FEVER.*

A. F. MYERS, M.D., BLOOMING GLEN, PA.

Miss G., aged 28, consulted me on March 2d, concerning a loss of appetite, slight headache, a little nausæ, chilliness, disturbed sleep, feeling of depression, muscular weakness and general indisposition. An examination revealed a pale, coated tongue, the tongue itself of a heavy, flabby appearance, and a tendency to constipation; no elevation of temperature. This condition of affairs continued for five days, when on March 7th the prodromic period ended and the first rise of temperature of half a degree was noted. The pulse rate slightly increased, the coating on the tongue being darker, with a disgust for food and an occasional nausea and show of epistaxis. More headache and the constipation. In fact my suspicions were confirmed and I pronounced my diagnosis of typhoid fever as we usually meet them. The temperature now run a typical course upward.

Thus passed on the first week of fever, all the symptoms becoming exaggerated with the exception of constipation which happily yielded to the exhibition of compound cathartic pills. Slight tenderness was now felt in the right illiac fossa and the appearance of sudamina in spots on the abdomen. The urine passed freely at regular intervals, no sediment and no albumen. Hence on March 17th,—mark the time—we had present a morning temperature of 101° and evening 103°, pulse rate 105 to 108 and some delirium during the night; more headache; only a moderate thirst and positive disgust for food.

There was *absent* on this day, and later, the characteristic symptoms of enlargement of abdomen, diarrhœa, tympanites, pain, sordies and irregular muscular action, this being about the beginning of the second week of fever.

During the following night the restlessness and delirium increased. Temperature at midnight was only 102.5°, and on the following morning, March 18th,—the fatal day—we found the temperature at 5 A.M. at 103°, accompanied by a violent throbbing headache. The patient stated that she felt worse in every way and mentally she was depressed. At 7 A.M. I was surprised to find the thermometer register at 104° and at 9 A.M. at 105°, the patient still conscious, and taking a little nourishment. At 10 A.M. the temperature was 106° and at 11 A.M., 108° in the axilla. The pulse rate from 130 to 140 per minute. The patient was now comatose and this high fever remained until death ended the scene at two o'clock that afternoon.

I was present when the patient died and having occasion to go to the room a half hour later I placed my thermometer again in the axilla and it still registered 108 degrees. What was the cause of my patient's sudden death, and why this elevation after death? Was it possible that the existing ailment was superseded by a more violent toxic influence—influenza—during the last day, or was the diagnosis in error?

Formulæ for the Use of Chloral Externally.

Dr. Brodnax (*La Semaine Medicale*) recommends the following formulæ for the external employment of chloral:

In cutaneous pruritus from urticaria, measles or other eruptions:

Chloral	ää o | 50 grs. xijss,
Carbolic acid	
Olive o l	50 | o ℥jss. gtts. xxx.

Apply locally.

In toothache:

Chloral	ää 5 | o ʒ j ¼.
Camphor	
Carbolic acid	
Glycerine	

Introduce a ball of cotton moistened with this mixture into the cavity.

In earache.

Chloral	ää o | 50 grs. xijss.
Camphor	
Carbolic acid	
Castor oil	15 | o ℥ iv.

Instill a few drops of this mixture previously warmed.

In acute coryza.

Chloral	o | 50 grs. xjss.
Castor oil	15 | o ℥ iv.

If applied to the nasal mucous membrane after cleansing of the surplus mucus this mixture will arrest the secretion, calm the irritation of the mucous membrane as well as the accompanying headache.

* Read before the Buck's County Medical Society, Doylestown, Pa., May 1st, 1895.

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SATURDAY, JUNE 1, 1895.

EDITORIAL.

HYPNOTIC SUGGESTION.

We have reached a period in medical progress when it seems proper to come to some conclusion in regard to the use of hypnotism, and while all will not arrive at the same conclusion, we believe that the profession will agree that, except under rare circumstances, the medical use of hypnotic suggestion is to be condemned.

Under the name of mesmerism, hypnotic influence was variously regarded as a manifestation of super-human power, as a simple fraud, or as the expression of a force mysterious merely because inexplicable. The more thoroughly hypnotism has been investigated, the more have its apparent mysteries been dissipated until, doubtless many will, agree with the extreme opinion that the hypnotised individual is merely one who is sleepy and impressionable.

The chicken with its bill held on a chalk line, the person with no previous thought of suicide drawn by an irresistable fascination to leap into the rapids at the brink of Niagara—and there have been not a few such—the child soothed to sleep by the touch of its mother's hand, the hysterical girl who becomes a willing tool in the hands of the neurologist after gazing at a complicated mechanism of revolving mirrors, the idler lulled into dreams by the murmur of the wind through the leaves, all present various phases of the same condition. We consider that, literally as well etymologically, the hypnotic state is a sleepy state and that it differs from ordinary sleep only in the unusual time of its occurrence and in certain artificial restrictions commonly placed about it.

The hypnotic state, like true sleep, may be produced by the repeated and monotonous stimulation of any of the higher senses; notably by sight and to a slightly less degree, by hearing and by touch. The temperature sense is also obviously to be considered in this connection; apparently that of smell, but probably not that

of taste. Certain persons can not be hypnotized even with their own assistance, while others can not oppose the mesmeric influence. But this fact is no more remarkable than that some suffer from insomnia while others fall asleep in spite of efforts to keep awake.

But what of the state of catalepsy; of the almost miraculous results of suggestion; of the manifestations of cerebration of which the patient has no subsequent recollection? Even these phenomena, mysterious as they seem, are duplicated in ordinary sleep. Have you never been awakened by the telephone, perhaps even by the ringing bell, to a sense of the necessity of immediate action, and yet felt that every muscle was in a tonic spasm and that motion was impossible? Is there any reason to suppose that the muscular rigidity which the hypnotist, by seizing on just the right stage of manifestation on the part of the patient, presents as so striking a phenomenon essentially different from the similar condition which attends almost every awakening from normal slumber, and which one shakes off by "stretching?" At the time of President Garfield's death, we were awakened (apparently) to hear the tolling of the bells; we answered questions rationally and seemed to comprehend perfectly the significance of the occasion; yet, in the morning, we were surprised and dismayed to learn that the President had succumbed during the night, nor have we ever been able to recall the interval of apparent consciousness. We mention this not as a remarkable occurrence, but on the contrary as one that can be duplicated in the experience of many persons who display no particular tendency toward somnambulism in the wildest sense of the term. However, are the imitations of self-consciousness by hypnotic subjects any more remarkable, or do they show any difference in kind? In sleep, too, one yields implicitly to the most ridiculous vagaries of his dreams, and, when merely sleepy, one is easily influenced by arguments and requests that would not appeal to him if the mind were active.

We believe that the medical use of hypnotism is on a par with the practice of stupefying a patient with morphine, of deceiving him with false hopes, or gaining his acquiescence through direct misrepresentation. The end will stupify almost any means in some emergencies which the physician has to meet, and we would, therefore not go to the extent of condemning hypnotism altogether. But the fact remains that the neurologists who make a routine use of hypnotism and suggestion, are beginning to be looked upon by many of their confreres and, to a growing degree, by the laity, as verging on quackery.

Suppose that a patient presents himself to some neurologist, with a hysterical monoplegia, retention of urine, aphonia, or any functional trouble. He or she is put in a proper state for suggestion by means of some instrument, more or less elaborate, for producing visual fatigue, and the suggestion is made that, after such and such a time, a certain degree of improvement will be manifest. The patient returns for treatment, and at each visit the hypnotic suggestion is made of greater and greater improvement until a wonderful cure is effected. In this procedure, which we believe to be not an unusual one, three deceits are practiced. The patient recovers more than ever convinced of the genuineness of his disease, and, therefore, all the more apt to relapse into the same or some other hysterical manifestation. He and his friends are agreeably flattered by the mysterious nature of the cure. And, lastly, the neurologist is credited with power over disease far in excess of that warranted by the real nature of the case. We have heard a prominent clergyman, formerly a physician, refer publicly to an hysterical aphonia from which he suffered, as a malady that threatened his

life. On the other hand, the physicians who treated him referred to the case in a medical meeting as an example of the wonderful benefit of hypnotism. In our opinion, such a "cure" is by no means a proper one.

If a physician is called upon to treat a man suffering with the pain of pleurisy, he has not fulfilled his duty when he has quieted the pain with an opiate, although the patient may take that view in his gratitude. In an hysterical aphonia or other paralysis, which is the essential condition calling for treatment—the immediate symptom which we know to be in a sense imaginary, or the underlying psychical depravity that allows of such self-deception? The clergyman to whom we have alluded, although somewhat emotional is really a man of good judgement and common-sense, yet he has been deluded into the belief that his life has been endangered, and his genuine gratitude to God and to his physicians is a matter of more or less ill-natured ridicule to those who know the true history of his case.

We fail to appreciate a striking difference between such methods and those of the advertising quacks who make a little more open use of the testimonials of their patients and who allow the latter to think that their illness has been of the most alarming nature.

Perhaps our meaning may be made plainer by a comparison to a purely moral question. Suppose that a child has appropriated a sum of money and, without calling his attention to the fact that a wrong has been committed, or without urging confession and reparation, we suggest to him the advisability of returning the money for fear he may be detected. To be sure, we have restored the proper financial level, but we have done nothing to reform the underlying dishonesty, and we have fostered a tendency to future wrong-doing. The proper moral management of such a child will occur to every right-minded person. In the case of hysterical manifestations we believe that the conscientious physician will endeavor not only to restore a functional equilibrium, but more particularly to bring about a realization of the self-deception which is one of the underlying factors in hysteria, and to develop proper physical stamina. We do not mean to imply that at the first visit the physician should bluntly say to the patient, "Your paralysis is all nonsense; nothing ails you except you are hysterical." Such a course would be as unwise as to call a child a thief for his first misappropriation of another's property. But with tact, gentleness and consideration for the patient's self-respect, the real nature of the hysterical manifestation should be gradually disclosed; self-control should be urged as the essential factor in a cure; and, without omitting proper medication, whatever suggestion is practiced should be made to a thoroughly conscious and responsible being, and not to one who is half asleep and wholly subservient to the will of the physician.

The Treatment of Diphtheria.

For the present the beneficial effect of the antitoxine of Koch, Behring, Kitasato, Roux, or, latterly, the serum of Risso, of Genoa, must be held *sub judice*. Heretofore the treatment has been mixed; that is to say, sole reliance has not been placed upon the new serum. Until such time, therefore, as we can avail ourselves of reliable reports from original sources of clincal application we should not discard what has proved of some benefit heretofore. In this sense the following is worthy of extended trial:

Acidi lactici pur..... ʒ;

Sig. Apply liberally to the membrane twice or thrice daily.

When this disappears, apply to ulcerated surface dustings of either iodoform or aristol powder. Constitutional treatment consists of large quantities of iron and milk.

Ecthyma Syphilitica.

Hydrarg. oxidi rubri.....
Hydrarg. ammoniati..... } āā gr. vj.
Adipis..... ʒj.

M. Sig. Apply locally.

SOCIETY REPORTS.

AMERICAN MEDICAL ASSOCIATION.

Forty-sixth Annual Meeting, held in Baltimore, May 7, 8, 9, and 10, 1895.

First Day.

The first session of the Forty-sixth Annual Meeting of the Association was held in the Music Hall, on Mount Royal Avenue. It was called to order by the President, Dr. Donald Maclean, of Detroit, at 10:45 A.M. The opening prayer was delivered by Rt. Rev. William Paret, the Episcopal Bishop of Maryland. Governor Brown was to have delivered an address of welcome to the State, but was unable to be present. The members were welcomed to the city by the Han. F. C. Latrobe, Mayor of Baltimore.

Dr. Samuel C. Chew, Chairman of the Reception Committee, delivered an address of welcome on behalf of the medical profession of Baltimore.

Dr. Osler, Vice-Chairman of the Committee of Arrangements, made several announcements, urging upon the members the duty of registering early and reading the programme for the day's entertainments. He said that the guide-book which was gotten up for the benefit of the members, had been hastily printed, and the proofs had not been submitted to all the members of the Committee; had it been, some advertisements which it contained would not have been admitted. He desired to express his own entire disapproval of certain of them.

Dr. Donald Maclean delivered the presidential address, taking for his theme, "A Few Living Issues Affecting the History of Medicine and What Came of Them."

A vote of thanks was offered upon the conclusion of the address, and it was requested that part of it which deals with the question of the establishment of a National Department of Public health be brought to the particular attention of the Government at Washington.

The report of the Judicial Council upon the question of advertisements in the *Journal* was then presented. The Council found that some objectionable advertisements had been admitted into the *Journal*, and they had called the attention of the Trustees and of the Editor to the fact.

It was then moved that the repost of the Trustees be made on Wednesday, and be at once referred to a committee which should make its report on the following day. This motion was vigorously opposed, and a substitute was proposed that a committee be appointed to confer with the Trustees before the latter should make their report. The motions were laid on the table.

It was moved that the Genito-Urinary and Dermatological Sections be united, and the question was referred to the respective Sections for consideration and action.

Dr. Millard, of St. Paul, introduced a resolution to present a memorial to the Senate Committee on Naval affairs praying that the officers of the medical corps of the navy may have the same rank, pay, and emoluments as are now enjoyed by officers of the medical corps of the army. It was moved and carried that this resolution be printed and that a copy be sent to the President of the United States, the Secretary of the Navy, and every member of the 54th Congress.

Dr. Deartus Connor, of Detroit moved that a committee be appointed to determine what proportion of the members of the Association are accustomed to use proprietary remedies in their practice, and that, if it should be found that a majority did prescribe these drugs, all objections to the printing of advertisements in the *Journal* be withdrawn.

This motion, like all the preceding which had touched upon the question, was at once laid upon the table.

Second Day.

The meeting was called to order by the

President at 10.40 A.M. It was announced that a delegation from the American Pharmaceutical Association was present and the courtesies of the American Medical Association were extended to it. The chairman of the delegation was invited to a seat on the platform. The Nominating Committee was then appointed.

DR. ALBERT L. GIHON, U. S. Navy, then presented the report of the Rush Monument Committee. He said that he had regretfully to report that the amount thus far collected for this most worthy object was only $3,094.39. It was a subject of reproach to the American Medical Association that the necessary amount for a monument to Rush could not be raised, while in a much shorter time the American Surgical Association had collected all that was needed for a monument to Gross. The speaker said that he could guarantee that the pedestal for the monument would be furnished free of cost to the Association, a beautiful and most commanding site was already selected, and all that was now needed was that the Association raise the money for the statue. A number of those present offered to give personally, or to be responsible for the raising of, sums varying from $50 to $500, and before the next business came before the Association, the funds of the Monument Committee had been increased by over $2000.

On motion, the thanks of the Association were extended to Dr. Gihon for his unremitting labors on the Rush Monument Committee, and the report of the Committee was accepted and ordered to be published.

The reports of the Secretary and of the Treasurer were read and accepted. The Committee on General Business reported adversely on the proposed establishment of a seperate section on orthopedic surgery.

The Secretary read a communication from the Section on State Medicine containing suggestions relative to the establishment of a National Health Department, and calling for the appropriation of a sum sufficient to meet the necessary expenses of bringing the matter before Congress. The communication was referred to the Trustees.

DR. WILSON, of Columbus, O., offered a resolution urging the Association of American Medical Colleges not to rescind the rule of a four years' course of study which was adopted at the last meeting, and deprecating efforts which were being made to reduce this limit of study to three years. The resolution was unanimously adopted.

The Malarial Disorders of Large Cities, with Especial Reference to Chicago, was the title of an address by William E. Quine, M.D., of Chicago, Ill.

THIRD DAY.

The meeting was called to order by the President at 10.30 A.M.

The report of the judical council was presented. The protests against the registration of certain gentlemen from Pennsylvania and Ohio were referred to the respective State Societies. The report of the trustees was then read. The report said that hereafter no advertisements of medical preparations would be accepted for the *Journal* unless the makers published at the same time the formulæ of such preparations. On motion the report was unanimously approved.

Dr. C. A. WHEATON, of St. Paul, then read the address on surgery.

A resolution to raise the dues to $6, the extra dollar to be applied to the formation of a building fund was referred to the Business Commiitee. No amendments were allowed. On motion all the pending amendments to the constitution and by-laws were indefinitely postponed. The proposed amendment to the Code of Ethics, striking out the clause forbidding the patenting of surgical instruments, was likewise indefinitely postponed. The report of the Committee on Department of Public Health was then presented.

The Nominating Committee recommended the following for election: *President*, Beverly Cole, of California; *Vice-presidents*, Dr. Chisholm, of Maryland, Lagrange, of Texas, Clarke, of Mississippi, and Satterwhite, of Virginia: *Secretary*, Dr. Woodbury, of Philadelphia, Pa.; *Treasurer*, Dr. H. P. Newman, of Chicago, Ill.; *Address on Medicine* by Dr. Osler, of Baltimore, Md.; *Address on Surgery* by Dr. Senn, of Chicago, Ill.; *Address on State Medicine* by Dr. Rohé, of Baltimore, Md.

The next meeting will be held at Atlanta, Ga., the first Tuesday in May, 1896.

FOURTH DAY.

On motion, the thanks of the Associa-

tion were tendered Dr. Holton for his address.

DR. OSLER, of Baltimore, offered a resolution urging the members to rally to the support of the "Index Medicus," the publication of which was about to cease owing to the lack of funds.

A report was read from the committee appointed to consider the feasibility of the establishment of a benevolent fund. The successful and beneficent working of relief societies in New York and elsewhere was referred to, and it was recommended that a benevolent fund be established in the Association. On motion, the report was accepted and the committee was continued, with instructions to lay before the Association at its next metting a feasible plan for the creation of the proposed fund.

DR. WOOLLEY, of California, introduced a resolution that Congress be petitioned to retire paper money of small denominations and to limit the circulating period of bills of large denominations.

Action was then taken on the report of the Nomininating Committee. It was moved that the report of the committee be accepted, save those sections of it relating to the Secretary and to the place of meeting. Carried. It was then moved that the recommendation of Dr. Woodbury for Secretary be not followed, and that Dr. Atkinson, the present incumbent, be continued in office. Carried. It was then moved that the next meeting be held in Washington, in accordance with a previous resolution designating that city as the place for the celebration of the Jenner Centennial on May 14, 1896. After considerable discussion the recommedation of the committee was sustained and Atlanta was named as the next place of meeting, Dr. W. S. Westmoreland, of Atlanta, being chosen Chairman of the Committee of Arrangements, and Dr. J. McFadden Gaston, jr., of Atlanta, Assistant Secretary.

A proposed amendment to the Constitution was submitted abolishing the office of Permanent Secretary and making the office an annual elective one.

The Association adopted a resolution which had been submitted by the Association of Acting Assistant Surgeons, memorializing Congress to pass a bill placing those who served during the Civil War on the same plane as first lieutenants in the regular army.

The following were named as delegates to the meetings of Foreign Medical Societies: Drs. W. H. Daly, of Pittsburg; J. H. Ouchterlony, of Louisville, Ky.; I. N. Love, of St. Louis, Mo.; C. G. Chaddock, of St. Louis, Mo.; L. N. Montgomery, of Chicago, Ill.; A. E. Rockey, of Portland, Ore.; I. N. Quimby, of Jersey City, and H. H. Biedler, of Baltimore, Md.

Dr. Beverly Cole, the President elect, was then introduced, and made a brief address of thanks for the honor conferred upon him.

The meeting of the Association was then adjourned.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Business Meeting.

Forty-fifth annual session was held at Chambersburg, May 21 to 24 inclusive, 1895.

The meeting was opened promptly at 9 o'clock by Dr. John B. Roberts of Philadelphia. The opening prayer was offered by the Rev. Dr. J. Agnew Crawford, and the address of welcome was given by the Hon. John Stewart.

Some remarks were made on the business methods of the society by Dr. Roberts, the President. He said:

"Concentration of authority and responsibility is greatly needed. The trustees who are in the eyes of the law the legal representatives, do nothing except decide ethical and judicial questions. Consequently, the details of the business are entirely in the hands of the President, Secretary, Treasurer and the various committees. . . . Business principles seem to demand that the by-laws be amended so that trustees shall really be trustees, and meet at least twice a year at

fixed dates to supervise and direct the work of the executive officers, who should make regular reports. . . . Under such supervision county medical societies who had forfeited by suspension their right to representation, would not be likely to appear in the "Transactions" as still in good standing; nor would new county medical societies be admitted to membership without complying with your organic law. The delegations to the American Medical Association and to other State medical societies would be larger and more enthusiastic. . . . Limited membership, lax discipline, inefficient work and expensive administration are the sure results of the present methods. Lower assessment, greater membership, more enthusiasm, better scientific work, and higher public respect will follow the application of a sound business policy."

The society voted that a committee of five with Dr. Roberts as chairman, be appointed to consider amendments to the by-laws in accordance with the suggestions of the President.

Dr. William B. Atkinson, the Secretary, reported that Bedford and Snyder county societies had been revived.

The Treasurer, Dr. G. B. Dunmire, reported a balance of $2,300.38 in the treasury. A committee consisting of Drs. Strickler of Waynesboro, Beatty of Philadelphia, and Free of Jefferson, were appointed to audit the Treasurer's report.

Twenty-seven hundred and fifty volumes of the transactions of the last meeting were reported as having been printed at a cost of $1,551. Dr. Jackson suggested sending the volume direct to members of the societies rather than to the secretaries. Referred to a committee.

The report of the Committee on Scientific Business, relating to the reception, arrangement and disposition of papers submitted, was presented by Dr. C. W. Dulles.

The report on Pharmacy was made by Dr. Adolph Kœnig, of Allegheny.

A resolution requesting chemists to omit directions for use from catalogues of medicines, and requesting the statement of ingredients of remedies, was read by Dr. LeMoyne of Pittsburg.

The report of the delegation from the State Society to the meeting of the American Medical Association was made by Dr. Edward Jackson, who also read Dr. Cohen's report of the meeting of the Association in Baltimore.

The report of the Committee on Increase of Membership was read by Dr. C. L. Stevens. He also suggested the establishment of a committee of three, whose work it should be to increase county societies, and arrange lectures before county societies. An appropriation of $50 each for three years, for this committee was asked for. Dr. August Ehler of Lancaster, moved the adoption of the resolution, which was carried. Subsequently Drs. C. L. Stevens, Thomas Davis, T. S. K. Morton, G. L. Hull and A. C. Wentz were appointed the committee.

The report on Medical Examiners was read by Dr. H. G. McCormick. The report, which carried with it an appropriation of $500 for the expenses of aiding the Board in enforcing the law, was adopted. It was ordered that the names of the men licensed to practice should be published. The fact that 12 per cent. had been rejected by the Medical Examiners Board, led to the recommendation of a preliminary examination to determine the fitness of the candidate to take the studies requisite to the medical course

The report of Dr. W. M. Weidman, of the committee on the Rush Monument, read by Dr. Atkinson, showed that the fund amounts to over $5000. $2000 had been added during the year. $15,000 or $20,000 is necessary for the erection of a suitable monument to Dr. Benjamin Rush. The committee was continued.

The report on Contagious Ophthalmia was given by Dr. Howard F. Hansell. A bill is now before the Legislature, prepared by the committee, to prevent the many cases of blindness resulting from purulent inflammation of the eyes of new-born infants, by imposing imprisonment for thirty days and a fine for the failure of midwives or persons in attendance to report such cases to a physician or to the Health Officer. Discussion resulted in the report being adopted and the bill endorsed.

The report of the Legislative Committee on the Care and Treatment of the Insane, was given by Dr. I. C. Gable of York. The report was adopted and the expenses of the committee directed to be paid. The committee was continued.

An amendment to limit papers to ten minutes and discussions to five, was offered but was laid on the table.

An amendment was adopted, delegating the arrangement of the programme to the Committee on Scientific Business.

WEDNESDAY.

The following officers, nominated by the Committee on Nominations, were elected:

President, W. S. Foster, Allegheny. Vice-Presidents, Drs. John Montgomery, Chambersburg; A. P. Hull, Lycoming; T. H. Sharpnack, Greene; A. B. Brumbaugh, Huntingdon. Secretary, William B. Atkinson, Philadelphia. Board of Trustees and Judicial Council, Drs. D. W. Bland, Schuylkill; T. P. Simpson, Beaver; Henry Beates, Jr., Philadelphia.

It was decided to hold the next meeting in Harrisburg.

Drs. W. F. Skinner, T. H. Weagley, H. G. Chritzman and I. N. Snively were appointed delegates to the American Medical Association Meeting to be held in Atlanta, May, 1896.

The following resolution was passed, on consideration of the subject of Dr. Benjamin Lee's paper, "The Necessity for a State System of Registration of Vital Statistics in Pennsylvania; and submitted to the Legislature at Harrisburg," namely:

Resolved, That the Medical Society of the State of Pennsylvania considers the registration of births, marriages and deaths, at the Central Bureau of Vital Statistics at the Capitol of the State, a matter of the utmost importance in the interest of medical science, of public health and of protection to human life; and, therefore,

Resolved, That the Society respectfully memorializes the honorable, the Senate and the House of Representatives of the State of Pennsylvania, in favor of the passage of the bills introduced at the present session, to authorize the State Board of Health to employ a clerk for the registration of vital statistics; to confer the powers of a Board of Health on the school board of each township; and so to increase the appropriation to the State Board of Health as to enable it to efficiently discharge this important duty as assigned to it by law.

Resolved, That copies of the preceding resolutions, signed by the President and Secretary, be at once transmitted to the Hon. C. Wesley Thomas, President *pro tem.* of the Senate, and the Hon. Henry F. Walton, Speaker of the House of Representatives at Harrisburg.

On Wednesday evening, in Wilson College, was given the address of the President, Dr. John B. Roberts, on "The Present Attitude of Physicians and Modern Medicine towards Homœopathy."

This address presented in a semi-popular manner the differences between modern or rational medicine, and homœopathy, quoting the definitions given by standard dictionaries. Homœopathy as advocated by Hahnemann was described as a *school* of medicine, while non-sectarian medicine was designated as a *science*, since it is in no way founded on a theory or hypothesis but is the result of investigation of chemical, physiological and physical facts. The reasons were given which prevent physicians who subscribe to no dogma, accepting the doctrine of Hahnemann. The statement was made that many physicians who are called homœopathists by the public and who accept membership in homœopathic societies, are not believers in all of Hahnemann's theories. Long quotations were made from Hahnemann's "Organon" and recent homœopathic writers. These quotations showed that there are still some homœopathic physicians who believe in the increase of drug-power by diminishing the dose, and in the efficacy as a means of treatment of the so-called universal and infallible law of "similars." The attitude of physicians who accept no sectarian name was said to be a dual one. Some hold that homœopathists who do not believe in the universality of Hahnemann's law, should make a formal statement before being admitted to the right of consultation with members of non-sectarian medical organizations. Others believe that the profession and the public would be benefited if a gradute of a homœopathic college, or a member of a homœopathic society who simply indicates his willingness to treat patients by all means, should be admitted to the right of consultation.

The author did not indicate to which of these classes he belonged. The paper was not written in a controversial spirit, but seemed to indicate that the author desired to permit the hearer to draw his own conclusions as to the relative merits of the case.

THURSDAY.

Dr. H. S. Anders of Philadelphia, of-

fered a resolution to endorse the adoption of the individual communion cup. Laid on the table.

Dr. H. B. Guyer offered a series of resolutions requesting the Committee on Pharmacy to obtain from the Pennsylvania Pharmaceutical Society the formulæ of combinations found in the National Formulary and Pharmacopœia which are identical with, or similar to, the various trademarked preparations.

The society adjourned on Friday morning, after a short meeting, during which a resolution urging the State Board of Health to inspect vaccine farms was offered by Dr. I. C. Gable, of York.

TENNESSEE STATE MEDICAL SOCIETY.

Dr. G. B. Gillespie, M.D., of Covington, read a paper entitled

ANTISEPTICS IN OBSTETRIC PRACTICE.

(See page 732.)

DISCUSSION.

DR. J. BUNYON STEPHENS, Nashville: There has been a wonderful and aluable change made in the obstetrical ne during the last few years. I am satfied but very few of us follow the modern lan. I have found but very few that do. In order to practice obstetrics successlly, we ought to learn the alphabet of it. I consider the terms obstetrics and midifery are not synonymous; midwifery ing the art based upon a science, while stetrics includes both the art and the ience. In order to be successful obstetcians we have to be anatomists, physiolots, therapeutists and surgeons. The orough obstetrician is not only an anatnist, a surgeon and a therapeutist, but so a gynæcologist, understanding not only e diseases and accidents of pregnancy d of the puerperal state, but all the seases and accidents, with the treatment, new-born children. Unless versed in these points, one cannot be a successful stetrician; one can rise no higher than e level of midwifery.

Frequently we examine patients and do t have in view the points proper at the ne. For instance, we make an examinion and find, perhaps, the head of the ild presenting. We consider, and genally tell our patient all is right, sit down our dignity and leave the work to ture.

I believe doctors ought to advise their trons to call the physician early in obtrical cases. He ought to be called o, three, four, five or six weeks beforehand, and prepare the patient for parturition. In that way we could get rid of much of the puerperal troubles we have. Besides, there is time to rectify any misplacements of the uterus or child. I have said before, no man ever turned a chunk of wood floating in water easier than he can turn the child when well surrounded by the liquor amnii, and entirely by external manipulation, without even introducing the finger in the vagina. I say without hesitation it can be done, although not in every case, for sometimes the abdominal walls are too thick. Perhaps more than two-thirds of this audience would deny this, but don't deny it until you have tried it. Keep up the manipulations for a while, until you get the abdominal walls in good condition. As we learned in school, "if at first you don't succeed, try, try again." You will succeed in most instances where the abdominal walls are thin and the different parts of the foetus can be felt and it is easily movable. This is one important reason why we should be called early.

When called I would say it is best to take modern antiseptic precautions in every case. First of all, use a vaginal irrigation—not with the 1.4000 bichloride of mercury, especially when we irrigate the uterus, for with this solution there is danger of mercurial poisoning. The creolin solution I prefer to any other. This done just at the beginning of labor no more irrigation, in my opinion, is needed in a case.

Not only should we make digital examinations, but we should also make external manipulations. The digital examination is principally to diagnose the position of the child. Frequently we don't do even that. We should observe several points: the size of the pelvis; the condi-

tion of the soft parts of the genital tract; and what effect the pains are having upon the uterus. While doing this we should also settle the question whether or not the woman is pregnant. We have been called to the case, supposing she is. I have known doctors to wait all night and all day, until the old gray horse had almost eaten the top rail off the fence, and then discover the patient is not pregnant. We must take into consideration all the symptoms of pregnancy and of labor. Are the pains true or false? Then we look for the position of the foetus; and we should determine whether the position is all right, knowing how the six different steps of the mechanism of labor progress. We will not interfere if nature is doing the work all right, but if going wrong we must interfere. If acquainted with the function of the parts concerned and the different steps, then and then only is it possible for us to practice modern obstetrics.

As to the delivery of the after-birth. Simply wait until the uterus is ready to remove it. Someone said here to-day it is no credit to a doctor to have cases of puerperal eclampsia, the idea being it indicates lack of skill to have such cases. The speaker, I believe, limited that rule to the cases one had an opportunity to see before labor, and I agree with him. In the same way I say it is no credit for a man to have a case of post-partum hemorrhage, or of hour-glass contraction. We ought to have no case of post-partum hemorrhage—unless in one of those 'flooders,' of hemorrhagic diathesis, who would bleed to death if we only pulled a tooth. If we follow modern directions we will escape cases of post-partum hemorrhage. Now, unless we are cautious in the removal of the after-birth, we will have cases of post-partum hemorrhage to treat. All things being eqnal, it is best to use the Crede method of expression after the uterus begins its contraction, if you have no time limit. If post-partum hemorrhage is threatened, we should remove the after-birth as quickly as possible. Under ordinary circumstances we should wait five, ten, fifteen or twenty minutes; and then remove the after-birth, not by taking hold of the cord and pulling, but by squeezing it out as you would a seed out of a plum.

What then?

The essayest said that there is no need for continued irrigation, and the use of the antiseptic solutions and all that has a routine practice. I think such things only worry the women, as well as the doctor, and accomplish no good whatever. If there is nothing abnormal in the lochial discharge, I think we ought not be in such a hurry to follow out the routine plans we find in some of our books. The books may be correct, but there never was a successful doctor who was a book-worm only.

Dr. Menees, Nashville, delivered an address on some questions of obstetric emergencies. In obstetrics, emergency means as much as it does in surgery or elsewhere, and what has science done towards modifying and mastering them. There are emergencies of that character which o'er-leaps the boundaries of science, and demand originality. Who of you whose heads have been whitened by the frosts of the same number of winters as has mine, and been fanned by the storms of time, have not seen emergencies which could not be controlled by the slow and cold routine of modern obstetric science? I am going to relate some cases of emergency which I have encountered in the last few years. And while I claim to have some little reputation for veracity, I would not dare to risk that reputation in the statement of these cases without giving the names of living witnesses, who are, I trust, in the hall.

Some twelve or eighteen months ago, I was called by Dr. W. G. Ewing, in a case of gestation advanced about six or seven months. The condition was one of extreme exhaustion, and death looked inevitable, and that, too, in a very few hours. There was extreme nausea, utter nervous prostration, the stomach retentive of nothing, and not a labor pain nor the sign of labor pain. The patient was pale, lips blue, cheek pallid almost as death, pulse faint and feeble, scarcely discernible at the wrist; the eyes even growing dim in the hazy twilight of another existence. We agreed that she must be delivered, and that she must be delivered *at once*. Artificial labor must be brought on or she dies. Then the question arose as to how to bring on artificial labor. Had we ruptured the membranes and waited, she would have been dead a dozen times before labor came on. Had we introduced the bougie and sponge tent, she would not

have lived one-fourth of the time necessary for response of the uterus. What were we to do? A human life trembled in the balance of the answering of the question. I told you the patient was almost dead, relapsed, exhausted; and, although there was no uterine contraction, the relaxation of death being on her, the os, of course, was patulous, and easily and rapidly dilatable. It was decided that (after a very modern practice, which was suggested in a very recent work upon obstetric surgery, but which work I had not seen at the time, and do not believe it had seen the press, I proceed passing the finger into the os, succeeded with another finger and then another, etc., giving time for dilatation. It is a physiological fact that there is no muscle which will not yield to time and tension. I got the uterus dilated. And allow me to say anæsthetics should be used here if you can use them at all; and in these extremes always I prefer sulphuric ether. Don't use chloroform. After dilating, I was to proceed to deliver by forceps or by version, as the particular indication seemed to demand. In this case the delivery was accomplished fifty-four minutes after the beginning of dilatation.

But you may say that was resorting to the hated accouchement force of the French. Well, there is a great deal more bugbear in that name than there is in the operation in the hands of a man who has brains and knows how to manage it. You have all got brains: you can all manage it. One thing you should always be certain about, however, in emptying the uterus thus hurriedly, and that is the precaution to give ergotin before beginning to provide against post-partum hemorrhage.

Another case. Sometime in the last six or eight months I was called by Dr. J. S. Maddin, Jr., to a primipara, where repeated hemorrhages had already occurred. We were very apprehensive about adopting the tete-a-tete policy, but we did adopt it. The thing went on for a few weeks, when I was hastily summoned by Dr. Maddin, who had arrived in advance of me. A frightful hemorrhage had come on in advance of both of us, and the patient was very much exhausted from the loss of blood. Fortunately, before my arrival it was temporarily controlled. Only temporarily, however. Dr. Maddin and I agreed it would not do to leave the case or the next thing would be a fearful, frightful, it may be fatal, hemorrhage in our absence, and she would be dead before we could come. While we were talking the nurse said she was flooding again. There was no labor, no dilatation; the patient was about eight months pregnant. But in these cases of hemorrhage you will almost always find a relaxed condition of the uterus, the os more or less under your control and manageable. Dr. Maddin and I agreed the only safety to the patient was to empty the uterus at once. How? By bougie and sponge? She would be dead before she had time to respond to that. There is no use of talking about that kind of fox-fire or moonshine in this kind of a storm. Then, what? Deliver *at once*. And what does deliver at once mean? I will tell you what it means. I introduced Barnes' bag into that uterus. Dr. Maddin inflated it. It served most efficiently and expertly. Under the relaxation of the uterus there was no pain. I gave her ergot to bring on uterine contraction against the time delivery would have occurred. We left the first bag until it dilated to its full extent, and then put in a larger bag. I watched its effect, Dr. Maddin dilating it at intervals, until I thought I had the door open by which that patient's life might be saved. I ruptured the membranes and delivered the child, and the patient was saved. If we had tried any of tomfoolery, there would have been two funerals.

DR. W. K. SHEDDEN, Williamsport: Antiseptic precautions were referred to. I wish to say, that the gentlemen may not be mistaken, that at the Preston Retreat, Dr. Price did not use antisepsis with the idea of preventing disease of the mother, but simply to protect the child's eyes. He does not attribute the results in the retreat to the chemical antisepsis, but to asepsis and cleanliness and to the location of the hospital. He had a consecutive run of over thirteen hundred cases without a death from any cause. He did not have a case of puerperal sepsis during his entire service at the retreat. He condemns in every particular the use of chemical germicides under almost any and all circumstances.

Another thing I wish to mention is the treatment of puerperal infectious troubles. First, each of the writers have recommended intra-uterine irrigations. I be-

lieve, as has been remarked by Dr. Price, it does not make so much difference what you take out of the abdomen as what you put in there. I would fear more trouble from the injections than from anything else. The curette, in my opinion, is one of the most dangerous instruments that can fall into unskilled hands, or even, I will say, into professedly skilled hands. I had the opportunity of seeing Dr. Price make two operations for puerperal peritonitis, from the use of curette. He says it is of frequent occurrence in Philadelphia. If this is true, the intra-uterine use of the curette in the puerperal uterus certainly merits condemnation.

Again, gauze packing was in the papers. What can be hoped to be obtained by the gauze packing in these cases. If it is used for drainage, it will absorb until it is saturated but it will not allow any accumulated material to escape. You would have to remove and repack constantly if you did it for drainage. I have seen the pelvic cavity opened and abscesses laid open, and a regular duck's nest introduced, through which no drainage could be obtained. Further, it has been said that the glass drainage is not a surgical drainage. That view was presented by a gentleman for whose opinion I have very little regard, in this respect as in many others. One reason for that disregard of his opinions is due to the fact that recently, while performing an operation for pelvic suppuration in the German Hospital of New York, he opened the abdomen, found what he believed to be a pus-tube, laid it open, and lo! and behold, it was a pregnant uterus at three months.

Dr. G. A. Baxter, Chattanooga: I did not hear the papers but I heard Dr. Sheddan's remarks, to which I wish especially to reply. A reply by experience perhaps is best of all. Three days before leaving Chattanooga I saw an operation for perityphlitis, the omentum being diseased, gangrenous, and the abdomen was opened with the discherge of perhaps a handful of loose pus. That portion of the abdomen, after separation of the adherent intestine, was filled with gauze and cotton placed on it. The doctor said that gauze is not a drainage. That dressing had to be changed in twenty-four hours. That did not come through simple absorption, but through the gauze upon the outside dressing. Consequently there must have been a capillary attraction. It must act as a drainage.

One experience is worth a world of theory. When we speak of puerperal sepsis, we must remember there are two classes of poisons here. One is a simple intoxication, the result of the absorption of the ptomaines alone, without the presence in the system of a single germ. In a few hours after birth the temperature rises to 105 1-20 perhaps. You immediately look for the cause and the first place you look is your wound, in this case the womb. You use your blunt curette. Nothing may come away but a shred of membrane, an organized clot or piece of placenta, and yet in a few hours the temperature may drop down to entirely normal. In such a case the poisoning is from the germs in the womb, and your curette has done good, and flushings will do good. A scraping does no good, but a simple loosening of those detached pieces of membrane or decomposing putrifying pieces of placenta does good. Afterward your curette will do no good. The matter poisoning your patient is germinating now and the germs are being absorbed into the system. After they are absorbed the cause is already in the economy, and consequently all the scraping you can do will do no good. Here curetting would be an actual harm. We must draw this kind of a line between ptomaine intoxication and septicaemia. I believe no man can lay down absolute rules for every case of obstetrics. There is no reason why in certain classes of cases we cannot say it is possible to obtain puerperal asepsis and so you need no chemicals, because here is a case yon can protect from all external contamination. But first you must know that vagina contains no germs.

Dr. W. K. Sheddan, Williamsport: I believe my discussion was misunderstood. Dr. Baxter refers to experience. The reason I made the assertion I did was the fact of my obsevation. Having watched gauze packing and gauze drainage and having seen the results I detailed, was the reason I said what I did. But as far as septicaemia is concerned, I believe we can accomplish with the clean finger all that can done with any kind of a curette and without as much danger. The finger can be made cleaner than a curette, and much cleaner than most curettes used. Therefore I would do the cleaning with the

finger, an intelligent agent. You are not going to perforate the uterine walls with the finger, but this has been done with the curette.

As to the class of cases he refers to, I saw two cases of acute septicaemia, or what I call acute purulent peritonitis. The tubes were filled with pus. There were general adhesions, pus free in the peritoneal cavity, temperature below normal, pulse 170, and the abdomen greatly distended. There was also constant regurgitation, which could hardly be called vomiting. After a thorough washing out of the abdominal cavity, the freeing of all abdominal adhesions, trimming off from the mesentery flakes of lymph as large as my two fingers, I irrigated again with hot Schuylkill water, unfiltered but hot. After irrigating with some ten or fifteen gallons of that water, and the use of a glass drainage, the patient made an uneventful recovery, leaving the hospital five weeks afterward in perfect condition. In such cases nothing short of complete and thorough work offers the least chance.

DR. BAXTER: Why, if the peritoneum can be douched with unfiltered Schuylkill water, cannot the uterus be douched with unfiltered water?

DR. SHEDDAN: It can in some hands. But I wish to raise my voice against the curettment of every supposed case of puerperal infection. Dr. Price, during my stay with him last summer, with a record of more than 9,000 labor cases, says he never used a curette. He uses his finger. In hospitals I saw cases curetted, and the death rate was high. Dr. Price attributed it to the thermal heat. He gave the patients only a little saline, and no deaths followed.

With reference to symphyseotomy, its applicability, and so on, I wish the speaker had been a little more full in his description in this regard, and also as to whether craniotomy is ever justificable on the livng child. I do not believe it is. Also, I would have liked to hear him discuss the advisability of the Porro operation and Cæsarean section.

DR. MURFREE, Nurfreesboro, I believe the time comes when the placenta should be delivered. If by the natural process it is not thrown off, an interference is demanded. It is not right for us to sit by the woman's side and see the placenta remain 15 or 20 minutes or two hours. So long as it remains after delivery, it is a foreign body and likely to be a source of irritation and danger. It is right we should wait a proper time, until the uterus has time to contract and the placenta separate from the uterine surface. But we should not wait an hour and a half or two hours. We institute the Crede method; if it is not thrown off in due time, it is the modern obstetric procedure to introduce the hand and take it out. It is not necessary in such cases to wait long for nature to throw it off.

In reference to Dr. Menees' remarks I have but little to say. His accouchement force was referred to in the paper.

I would only criticise him for relying upon ergot or ergotin to relieve the post-partum hemorrhage. I have but little faith in it. I have infinitely more confidence with one hand on the inside and the other on the outside to produce contraction in post-partum hemorrhage, than upon all the ergot that could be injected. The irritation of the hand will produce a contraction of the muscles of the uterus.

In primapara Dr. Stephens spoke of accouchement force. There comes a question that is debatable. Is that the best plan to pursue? Or, it is better to rupture the membranes and tampon? In the accouchement force there is a forcible dilatation, and unless the emergency is very great we can better afford to rupture the membranes, and then by the vaginal tampon the hemorrhage can be arrested and the contracttion will take place and the fostus be expelled. That is done with much less damage to the woman's parts than with the accouchment forcé.

In reference to intra-uterine irrigation. I think there is danger of carrying poisons into the uterus; but, it is not necessary until a septic focus has formed, and that must be removed. Then we must hunt for the lesion, wherever it may exist, and remove it. It may be, possibly, in the vagina, and then the vaginal douche will wash it out. But is that fails we have no alternative but to go into the uterus.

The docter speaks of using his finger better than a curette. Well, some people may; and again, some might use the curette all right. But we should remove the microörganisms from the uterus, it matters not whether with the finger or

with the curette. The curette, it is true, has done harm, but that is no objection to the intelligent use of the curette.

How many times has the brain been impinged upon by the trephfs in unskillful hands? Does that condemn the trephine? No more do these cases condemn the curette. But be that as it may, the grand principle is to clean out the uterus and get rid of all septic fori and remove all irritation. The douche will not no it, because the microörgrnisns have burried themselves.

Dr. G. B. Gillespie, Covington (closing the discussion): I agree with what Dr. Murfree has just said, but I do not agree with Dr. Sheddan. I do not believe harm was ever done with the curette in the hands of a skilled surgeon, but I believe any harm that may result occurs in the hands of an unskilled surgeon. I pack with gauze, which I believe is a good drainage and the best we can use, and do not agree with Dr. Sheddan when he says it is not a drainage. Very seldom will you, in the treatment of these cases, have to deal with pus-tubes. Of course, if they occur, curetting will not remove them. I have operated a number of times and flushed the cavity with sterilized water without any harm to the patient. I have operated on a number of cases and never lost one. I have packed many times, but never needed to repack. The patient always made a rapid recovery.

As to removing the placenta, I believe in waiting only a short time, five to ten minutes. It is unnecessary and probably do harm to wait longer.

"Hygiene of Circumcision."

Read by W. Frank Glenn, M.D., Nashville.

(See page 733.)

DISCUSSION.

Dr. C. R. Atchison, Nashville: I am an inveterate enemy of the prepuce. Why it should still cling to us I am unable to state. In olden times, when men relied upon the fig leaf for their protection, and chased game through the underbrush, and perhaps, through the briars, this leather pouch was, perhaps, a good protection. But now, since we have become civilized and wear clothes, we certainly could do without it. The Hebrews have practiced circumcision from their beginning as a race. As a result you find few inmates of asylumns and few drunkards among them. The reflex neuroses which can come from it certainly are many. It increases the sexual appetite. It is the cause of many diseases. The prepuce should be taken off. Not in all cases, for nature partly attends to it in an abnormally small one; but, wherever it is pendulous, I believe it should be removed.

Dr. T. J. Happel, Trenton: The operation I have often performed, not in the child but in the adult. Had it been done in the child, it would not have been necessary in the adult, because the disease which rendered it necessary would not have existed. In every family every male child should be circumcised. It is a truth which cannot be controverted, that you don't find Jews in work-houses, jails, or asylums. This must be accounted for by some pecularities of the race, and there is nothing more strongly marked in the Jewish race than the practice of circumcision. In this way they are protected thoroughly from disease. A nasty, long prepuce acts as a suction to draw in gonorrhœal fluid, loaded you say with microbes—with poisons. Many boys, for this reason, contract diseases which otherwise they would not contract.

Dr. W. I. Scott Dixon: I see the profession is in favor of severing as many as possible of the parts of the body. They said at Memphis, the vermiform appendix is unnecessary; now they say the prepuce is unnecessary. We don't know, yet, how far the Lord erred in making man.

Dr. J. B. Gowan, Tullahoma: I want to ask Dr. Glenn a question. Is it not a fact that in every instance where there is a prepuce which cannot be withdrawn over the glans, we have a masturbator? Does not the irritation produced by the long prepuce and the failure to retract, act as a factor in causing masturbation?

Dr. Glenn: I have not statistics as to every case, but I believe it has a tendency in that direction.

Dr. Cowan: I heard Dr. Glenn read a paper before, on a similar subject and I have always considered him an authority on it. and have for many years advocated circumcision in boys, every time and at an early age. The longer we defer it, the greater the danger. The neuroses from the irritation of the long prepuce, were

referred to a while ago. We have a work on that subject, *Psycopathic Sexualis*, but in it the fact is missed that where they have not the power to retract the prepuce we always have the conditions that have been described. I am glad that Dr. Glenn said what he did about the operation being done in the lying-in room. I believe it should be done there, and if he neglects it and anything occurs afterwards, the physician should be held accountable for it. I have never in my life seen a boy that couldn't retract the prepuce, but what was a masturbator.

DR. GLENN: Did you ever find any boy that was not a masturbator?

DR. COWAN: Well, I think I have. I will qualify that remark. I think I have found boys who were not masturbators; I mean excessive masturbators, of course. One of the saddest cases I have ever known was in a very bright boy. He conceived trouble, and by a mere accident it was discovered. The prepuce was removed and he obtained sufficient mastery of himself to control himself. I believe we commit a sin by not examining all cases.

DR. N. C. NEWMAN, Normandy: I am in favor of circumcision for the reasons stated by the essayist. We don't see the Jews in our workhouses, jails and county asylums, and you want to lay that now to the fact they were circumcised. But I don't lay it to that. God said the Jews were His peculiar people. He said again, salvation was of the Jews. We have a book called the Bible, not a word of which but was written by a man inspired, not a Jew. When God had said the Jews were His peculiar people on the earth, and they were being destroyed by the armies and nations around them, He said to the Jews, "I will make an end of the nations that destroy thee, but I will make an end of you." The nations around them were destroyed. The Roman armies are of the past. There is not a drop of Medo-Persian blood on the earth. According to that prophecy, to-day we find Jews, hundreds and thousands of them, whose blood is as pure as that which flowed in the veins of Abraham. Now, gentlemen, don't attribute all this to the fact they have not the foreskin. Remember the hand of God has guided them. They have the record, to-day, of an unbroken lineage.

DR. ROBERTS: I will not go so far as Dr. Cowan, but I will say this, conscientiously and honestly, that I have never yet been consulted in a practice of more than a third of a century, by any one for the effects or results of masturbation but I found an elongated prepuce. So far as my memory will go, in proportion to the number of Jews who have consulted me, I have found among them less of the communicable specific diseases than I have in other races. As regards the terrible vice which so often makes a wreck of a young man's life and makes him worse than the inmate of a tomb, in no instance have I been consulted but I found circumcision was necessary.

DR. SHEDDAN: I would like to ask a question. The necessity of doing the operation in the lying-in room has been suggested. I would like to know whether it is possible to deliver a woman in the country or not. I suppose it is necessary to have an ophthalmologist to prevent or remove this appendage; and, I suppose, an abdominal surgeon to remove the vermiform appendix.

DR. GLENN, (Closing the discussion): I have studied this question a number of years, but I am afraid some of the members do not see it as I do. I think the damages done between the ages of twelve and eighteen years by excessive masturbation are little appreciated by ninty-nine out of a hundred people. It has become so common. The nervous weakness, the neuroses, the mental weakness, the premature old age, which can be attributed to sapping the individual when he needs his strength the most, I think is not fully appreciated. I firmly believe and freely say we should not stand by and say, "Of course, every boy must masturbate; of course every boy has gonorrhœa; and of course every boy has intercourse; that is all right. We should say, "It is wrong. It is wrong for your health; it is wrong for your mind; it will make more criminals, and therefore they should not have an emission, as physical men, until they are grown." The nervous system should be nurtured and the habits regular until the man is grown, until nature has made him ready to perform the functions of a man; and then he remains a man with the nature of a man, and is able to put passion under him and is not to be guided by his passion. I know of an instance in which a man was a raiser of thoroughbred horses

and had a number of stallions. He would allow no stallion to cover more than two mares in twenty-four hours; one in the forenoon and the other in the afternoon; and yet that same man would go to a house of prostitution and would have intercourse six or seven times in a night. He came to me with weakening. He said, "I used to have intercourse six or seven times in a night; now I can only have it three times." I said, "Do you know what I would recommend?" He said, "No." I said, "Castration. You will not allow your horses to have intercourse more than twice a day, and yet you have intercourse several times in that time."

We do not appreciate the injury to the race that the subversion of the sexual function as a slave to passion, is. I regard the sexual devolpment as the height of creation, from a highly hygienic standpoint, not as a degraded passion. I think God stamps His wisdom in the regenerative function. Sap the sexual function and you sap the individual's life. However fat and well he may look, he knows he is not the man he was; he is not the man he should have been. We should look to the removal of the prepuce as the remedy in many cases. An unknown trouble, as when a little boy is unruly and restless and nervous and his mother cannot control him, may be due to an irritating prepuce. I have known, as you have, after circumcision in such cases, a thin child will become a big, fat, bouncing fellow and healthy. Whether God made a mistake or not, I do not know. Whether Moses was an inspired man or not, he said he was, and God said he was; and Moses said the boy should be circumcised.

I failed to do it in the case of my own boys when they were born, but I will do it now in one of them when school is out. I use the plainest talk to them about gonorrhœa and syphilis. Then I teach them to come to me if anything occurs wrong, as the one to trust implicitly. I believe many boys get into the habit through ignorance, and continue it through ignorance. The first fire they have often is engendered through the quack circulars circulated around the country. I have had them come to me with that statement. I believe the chief object in Moses recommending it was to prevent this habit. It also prevents, largely the contraction of syphilis. Also, if syphilis or gonorrhœa is contracted, it enables the surgeon to treat it much more easily.

I do not want to be considered a radical crank, but I do not believe there is any one thing could be done that would exercise as great influence on the race as the circumcision in infancy of every male child that is born. This wetting of bed, in boys, is often dependent upon a long, irritating prepuce, and they get well as soon as you circumcise them.

Chordee.

In a paper on "Local Anesthesia," Dr. Wm. P. Carr, of Washington, D. C., writes, *Med. Bulletin:* "In this connection I may mention a fact well worth knowing, and I think not generally known, that chordee may be entirely and promptly relieved by putting on a condom containing two or three drachms of a two per cent. solution of carbolic acid, and that any pain in the penile portion of the urethra or pendulous penis may be controlled in this way."

Diet in Diabetes.

Dr. Charles H. Ralfe gives (*Clin. Jour.*) the following:

Pure Gluten flour..... (Or instead wheat flour)....	12 oz
Animal food (fish, meat, poultry).....	16 oz
Green vegetables.....	14 oz
Fatty matter (butter, cream, bacon).....	12 oz
Miscellaneous (eggs, cheese, Iceland moss, etc.).....	14 oz

About liquids the safe rule as Dr. Ralfe recommends, is to allow ingestion to exceed excretion by about twenty ounces.

Neurasthenia.

The following was a favorite prescription of Sir Andrew Clark for various kinds of neurasthenic debility:

Acid phosphate.....	ʒj
Ext. cocæ liquid.....	ʒss
Ext. damian. liquid.....	ʒss
Tr. nucis vomic.....	mx
Syrup. zinglb.....	ʒj
Aquae, ad.....	ʒss

Ft. dosis.
Sig. To be taken in water at 11 A.M. and 6 P.M.

—*Practitioner.*

Lice.

Hydrarg. oleatis.....	gr. v.
Acidi oleici	gr. 95.
Ætheris.....	gtt. xij.

M. Sig. Apply twice, twenty-four hours apart.

—*Marshall.*

Ol. rosmarini.....	ʒ ss.
Ol. olivæ.....	ʒ iss.

M. Sig. Apply once daily.

—*Ringer, Ex.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Absorptive Power of the Vagina.

Coen and Levi have recently made some observations on the absorptive power of the vagina under various conditions of health and disease. Iodide of potassium is easily absorded. If a tampon soaked with a 20 per cent. solution be introduced into the vagina, iodine can be found in the urine in an hour. The excretion reaches its maximum in twenty hours. Fever and pregnancy increase the absorption. Hysterectomy makes no difference. Iodoform is absorbed slowly and in very small quantities, but more if fresh than if old. Salicylic acid is absorbed quickly, appearing in the urine in one hour and disappearing in twenty four hours. Salol is very readily absorbed. Antipyrine is execreted in an hour and a-half and is found for forty-eight hours, but its antipyretic action is feeble as compared with administration by the stomach. In brief, the vagina has undoubted absorptive power, and this is increased in pregnancy, in the puerperal state and pyrexia.—*North American Practitioner.*

Artificial Respiration in Cerebral Compression.

Horsley has shown that death, in cases of compression of the brain, whether from cerebral hemorrhage, fracture, and depression of the skull, or tumor of the brain, is due to failure of respiration. While permanent relief can be obtained only by a surgical operation in these cases, temporary relief, by which a patient may be kept alive, may be obtained by means of artificial respiration, which should be employed even in the most desperate cases. Hot fomentations should also be applied to the head, or hot water may be poured upon the head. Mr. Horsley is utterly opposed to the application of ice to the head.—*Mod. Med.*

Vinegar Inhalations to Relieve Vomiting after Chloroform Anæsthesia.

The inhalation of vinegar by means of a compress wet with ordinary vinegar placed over the face of a patient, is in use in McEnrode's clinic at Berlin, as a means of relieving the vomiting after chloroform anæsthesia. It is also successfully used in other continental clinics. The favorable effects of the vinegar are claimed to be due to the stimulating action of acetic acid on the respiratory organs, and the combination of the acetic acid with the chlorine exhaled from the lungs as the result of the decomposition of the chloroform, whereby it acts as an antidote. The inhalation should be continued until the nausea disappears.—*Mod. Med.*

Accidental Swallowing of a Stomach-Tube.

Landstrom describes such a case (*Hygeia*) the patient being a seamstress who was performing lavage of the stomach for round ulcer, and who swallowed a portion of the tube, forty-eight centimetres long and eleven centimetres wide, solid and somewhat inelastic. She fainted, and for some days after suffered from severe, bloody vomiting, nausea, and intense pain at the pit of the stomach and in the bowels. She was unable to take any nourishment. Eight days later Landstrom detected the foreign body, doubled on itself, in the iliac fossa, immediately above the centre Poupart's ligament. Laparotomy was performed by Ekehorn, and the tube was found in the ascending colon, the torn end being clearly seen through the intestinal wall. A longitudinal incision of three centimetres was made in the bowel, the tube extracted, and the incision sutured with fine silk threads, two rows being placed throug the muscular and serous coats, and another row through the abdominal wall. An aseptic bandage was applied and the patient recovered from the operation without incident.

The Absorption of Pleuritic Effusions After Hypodermic Puncture.

Dr. F. Jordan (*Allg. med. Central-zeitung*) draws attention to a new procedure, which on account of its simplicity and harmlessness, deserves to be better known and studied. Jordan, in investigating the therapeutic effect of various surgical measures on pleuri-effusions, noticed that the quantity of urine increased very considerably after having made an exploratory puncture with a hypodermic syringe. This observation he made in the first instance on four patients, and not being able to account for the increased flow of urine in any other way except as the result of the exploratory puncture, he repeated the process on fifteen other pleuritic cases, with the same result. The quantity of urine, which before the operation had amounted to 200-800 c.cms., increased after it to 2,000, or even 5,000 c.cms. This diuretic effect showed itself about two or three days after puncture, but sometimes not until the eighth or ninth day, and continued until the whole of the effusion had disappeared. Twelve of the cases were chronic, with serous effusion, and three acute (two serous and one hemorrhagic). The amount of the effusion was in all cases "more than mediumly large," and in two it reached to the second and third ribs respectively. The diuresis was accompanied by an abatement of the temperature. It took on the average about two months to complete recovery. In one of the acute cases with large effusion, five weeks after the operation only traces of the effusion could be

discovered. Jordan does not give any satisfactory explanation of the *modus operandi* of the procedure.

Milk Diet in Typhoid Overdone.

Da Costa thinks the exclusive milk diet is a source of mischief rather than good, and recommends three parts of milk alternated with one broth. He, however, evidently does not recognize the fact that the latter has scarcely any food value, the little extract of meat it contains acting solely as a stimulant, and, moreover, with a great tendency to cause flatulence. It has on several occasions been pointed out that whenever curd can be seen in the motions, too much milk is being given, and it may even indicate that it is not being digested at all. It is best replaced by white of egg beaten up and largely diluted with water; in this way can be introduced any requisite amount of real food, and in the blandest and most readily digestible form; it leaves no solid residue, and can cause neither diarrhœa nor gaseous distention.

For Obesity.

Take no water or other fluid at any time, except one cup of any desired hot drink, just before rising from the table. Use no liquids while eating. Avoid sugar, nuts and pastry. Eat nothing between meals. Confine the diet to lean beef, mutton, chicken, turkey, fish, eggs, oysters, with one slice of stale bread well dipped, the bulk of the meal being of tomatoes, celery, spinach, turnips, cabbage leaf, but not the fleshy mid rib, and fresh or dried fruits, cooked without sugar, such as apples, peaches, plums, prunes, prunellas. A little cheese is permissible; coffee, tea, skimmed milk or buttermilk after eating as stated. Exercise should be taken, running being most effectual, before breakfast or before going to bed.

A Rare Form of Total Cystic Degeneration of the Liver.

Z. Dmochowski and W. Janowski (*Beitr. z. Pathol. Anat. u. Allg. Pathol.*) describe an enormously enlarged liver, measuring 40 by 33 by 18 centimeters, and weighing 10,850 grammes, composed entirely of a collection of cysts, so that almost no normal liver tissue was to be seen. The kidneys were similarly affected. The liver cysts varied in size from a pin's head to a small cocoanut; they were filled throughout with a clear fluid containing plates of cholesterin, some of them colored by the bile. Microscopic investigation revealed an enormous increase in the connective-tissue of the liver. The cells lining the gall-ducts were intact. Many of the cysts, both large and small, had thick connective-tissue walls; in the larger ones the epithelium could not be seen: in no case were broken-down partitions found. The liver cells in the neighborhood of the cysts were much distorted by pressure.

According to the authors, this is a case of primary atrophic liver cirrhosis, with secondary cystic fibro-adenoma, which began in the bile-ducts.

NEWS AND MISCELLANY.

The semi-centennial of the Ohio State Medical Society was held in Columbus, May 15th, 16th and 17th. The meeting was the largest in the history of the society, there being about five hundred in attendance. Also, there were more new members received than at any previous meeting, one hundred and four being added to the list.

The election of officers resulted as follows:

President, Dan Milliken, M.D., Hamilton; Vice-Presidents, J. H. Goss, M.D., Lancaster, William H. Humiston, M.D., Cleveland, John W. Murphy, M.D., Cincinnati, B. M. Ricketts, M.D., Cincinnati; Secretary, Thomas Hubbard, M.D., Toledo; Assistant Secretary, H. M. W. Moore, M.D., Columbus; Treasurer and Librarian, Jas. A. Duncan, M.D., Toledo.

STANDING COMMITTEES.

Finance, J. G. F. Holston, M.D, Zanesville; Ethics, J. C. Reeve, Sr., Dayton; Publication, R. Harvey Reed, M.D., Columbus; Legislation, Geo. A. Collamore, M.D., Toledo; Admissions, A. B. Richardson, M.D., Columbus.

Deer Park on the Crest of the Alleghenies.

To those contemplating a trip to the mountains in search of health and pleasure, Deer Park, on the crest of the Allegheny mountains, 3,000 feet above the sea level, offers such varied attractions as a delightful atmosphere during both day and night, pure water, smooth, winding roads through the mountains and valleys, and the most picturesque scenery in the Allegheny range. The hotel is equipped with all adjuncts conducive to the entertainment, pleasure and comfort of its guests.

The surrounding grounds, as well as the hotel, are lighted with electricity. Six miles distant, on the same mountain summit, is Oakland, the twin resort of Deer Park, and equally as well equipped for the entertainment and accommodations of its patrons. Both hotels are upon the main line of the Baltimore and Ohio Railroad, have the advantages of its splendid Vestibuled Limited Express trains between the East and West. Season excursion tickets, good for return passage until October 31, will be placed on sale at greatly reduced rates at all principal ticket offices throughout the country. One-way tickets, reading from St. Louis, Louisville Cincinnati, Columbus, Chicago, and any point on the B. & O. system to Washington, Baltimore, Philadelphia or New York, or vice versa, are good to stop off at either Deer Park, Mountain Lake Park or Oakland, and the time limit will be extended by agents at either resort upon application, to recover the period of the holder's visit.

The season at these popular resorts commences June 22d.

For full information as to hotel rates, rooms, etc., address George D. DeShields, Manager, Deer Park, or Oakland, Garrett County, Md.

—4-t. CHAS. O. SCULL,
General Passenger Agent
B. & O. R. R.

THE

MEDICAL AND SURGICAL REPORTER.

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ORIGINAL ARTICLES.

FURTHER OBSERVATIONS ON THE OPERATION OF EXCISION OF THE MEMBRANA TYMPANI AND OF THE OSSICLES IN NON-SUPPURATIVE (CATARRHAL) INFLAMMATION OF THE MIDDLE EAR.

LAURENCE TURNBULL, M.D., PH.G.,* PHILADELPHIA, PA.

In our former papers † we, perhaps, did not dwell sufficiently, upon the subject of drainage but as we are dealing with the first form dry, non-suppurative, mainly, the great importance of drainage need not interest us so much as when we come to the suppurative from of middle-ear inflammation. We have never had a persistent discharge to follow our operations, but we have had it so stated where it occurred in the hands of others.

In advising this operation it is well to explain in detail how little may sometimes be gained. Yet how important that little of hearing may be, is shown by the entire relief from vertigo, prolonged pain and tinnitus, or by its sudden loss. Again where deafness is progressive, *i.e.*, to judge from cases already observed, the progress of chronic inflammation may cease after the mucous membrane of the drum undergoes dermic transformation.

We have been forced to the conclusion that on the removal of the drum head malleus and incus, sound enters the labyrinth through either or both windows, since we have witnessed great improvement from an opening made in the drum head without separation of the incus from the stapes. But no way is at present known of ascertaining beforehand absolutely, except those before given in our paper, whether fixation of the stapes exists in any given case.

The writer's experience in operating for the relief of subjective symptoms only is limited. It has been found, however, that where there existed vertigo and noises in the head, they have been alleviated or cured entirely by excision. Where very great relaxation of the transmitting mechanism exists, giving rise to severe autophonia, noises, vertigo, etc., the operation would seem to be indicated. As a rule it is probable that the earlier in life, as well as earlier in the disease itself, the operation is done the more successful it will be.

The author has found that the chorda tympani nerve is usually not disturbed by this operation, especially where it is possible remove the incus first. If, however, it happens to be drawn down into view a section of it may be removed, the result-

* Aural Surgeon to the Jefferson Medical College Hospital, etc.

† Vide MEDICAL AND SURGICAL REPORTER., current vol.

ing disturbance in taste being of short duration. Where the incus cannot readily be found, protracted search should be avoided, since its retention could not be productive of so much harm as are rude attempts at removal. Experience, moreover, shows that the removal of the incus is not absolutely necessary to a favorable result of the operation.

The parts should be carefully cleaned with absorbent (iodoform) cotton after the operation, or packed with iodoform gauze. There is but little if any pain experienced by the patient on coming out of the narcosis, and a drop or two of a 10 per cent. solution of cocaine is sometimes sufficient to allay any discomfort. Syringing is not advisable, as a rule. It is necessary to practice antiseptic precautions in this operation, as in all operations on the ear, either internal or external. In and about the ear the parts should be well washed with green antiseptic soap, after which with a solution of bichloride of mercury (1-2000), then with ether in which soap has been dissolved. The hands, and especially the nails, should receive close attention. All the instruments should be dipped in hot 1 per cent. solution of carbolic acid and soda before using. When operating this solution should be kept hot by a spirit lamp.

In five or six days, any tissues left partially detached during the operation and which has become necrotic, if not discharged, should be removed. The quantity is usually very small, consisting only of shreds of tissue. Chiselling away a portion of the sulcus tympanicus is quite unnecessary, indeed the procedure is, from the irritation caused, likely to favor reproductive action.

As result from exposure in very inclement weather decided suppuration may go on. This has to be promptly treated with equal parts of powdered anti febrin and boracic acid.

Extreme care should be taken in all cases to prevent suppuration, and irritation of the parts in any way prevented. Some cases need not be even wiped out, the slight discharge being allowed to become inspissated. Crusts are thus formed in the end of the canal and over the margin of the remaining rim of the drum head; the fundus gives the appearance of having been closed in by reproduction. On finally detaching these crusts, sometimes a large opening will be found. After healing has taken place the mucous membrane undergoes dermoid transformation, its sensitive mucous surface having disappeared.

Dr. Sexton* found operation was more successful, as regards maintaining an opening in the drumhead, in persons of light build and in those who were not given to the use of stimulants or the consumption of a large amount of meat.

Referring to the recent work of Dench, in this operation, or any intra-tympanic operation, I find that he considers it always necessary to use a general anæsthetic except for the division of adhesions, and in his cases even where no discharge is present he advises a douche of a solution of bichloride of mercury 1—5000 several hours before operating.

We, usually, have operated on a couch, bed, or ordinary reclining chair, with the patient on the side, the head elevated on a pillow, while the operator seats himself on a level with the ear to be operated on. The anæsthetic is given in this position and the patient kept quiet, and disturbed as little as possible. Our author considers the position as a matter of no little importance, as effecting the result of the procedure. As the operative field is extremely limited, the surgeon should avail himself of every means in his power to have the head in such position that he can easily see all parts of the tympanic cavity and conduct his manipulations without the necessity of assuming an uncomfortable position. To this end he "now operates with the head and shoulders well elevated, the head being supported upon a rest which admits of motion in all directions. The patient is anæsthetized in the recumbent position annd after thorough etherization is raised to the desired posture upon the German head-rest. Elevation of the head and shoulders also diminishes the hemorrhage, and the blood instead of flowing into the upper and posterior portion of the fundus of the canal in the region of the incudo-stapedial joint, is directed to the floor of the canal, and hence does not obscure that portion of the operative field which demands our closest attention."

"Straps passed under each arm prevent the body from falling downward during the operation." [I am always afraid of

* Report of the New York Ear and Eye Infirmary; also in his recent work on the ear.

this position in the use of general anæsthetics.]

Some writers, notably Sexton, remove the incus before the malleus, and if the long process of the ossicle can be easily grasped after the incision of the membrana has been completed, there is no objection to this being done. Of late, however, Dench has stated that he has almost invariably extracted the malleus first (as we have here recommended,) and he finds the procedure less difficult than the other. If the incus has passed beyond the line of vision it can usually be brought into view by means of the incus hook. "These hooks are curved in opposite directions for the right and left ear, and are to be inserted into the handle in such a way that the hollow looks anteriorly; this hook is inserted into the posterior portion of the tympanum and being carried behind the ring, is then swept cautiously forward through the fornix, very little force being used. In executing this manipulation the hook should be kept in contact with the tympanic ring by gentle traction outward. In this manner it is usually possible to bring the long arm of the incus into view, presenting it close to the margin of the ring and being easily recognized; the difficulty in finding the incus frequently arises from the fact that we are inclined to search for it too high up, and too deeply in the cavity; the previous removal of the malleus usually loosens the attachments of the incus and allows the ossicles to fall somewhat backward and downward; it moreover, usually hugs the margin of the ring closely, and often at first seems to belong to this structure, but a touch with the probe or hook will push it further into view and reveal its true nature."

Our author is of the received opinion that it is better to avoid the removal of the bony ring, if possible, when the stapes is concealed behind the margin of the ring. If found rigid, incisions should be made around its base, then by gentle pressure with the cotton-tipped probe, applied at first below and later at its outer border, so as to render it more movable. This procedure has been carried out by Boucheron, Miot and others, when he considers it advisable to remove the stapes, and this we consider very rare, it can be extracted either with the forceps, or better by means of a blunt hook passed between the dura after dividing the attachments about the foot plate. He packs the ear with antiseptic gauze, but in a few hours this is removed and the ear syringed with a weak antiseptic solution, a saturated solution of boric acid or a bichloride solution, 1–5000 being used, and the gauze is replaced. Upon the following day the gauze is dispensed with and the patient is ordered to douche the ear with the antiseptic solution, twice or three times daily according to the amount of the discharge. Too much douching is highly objectionable, the purpose being only to keep the parts cleansed.

We most strongly object to this douche, as it prevents the prompt healing of the wound and tends to produce a moist condition and discharge. For this later free discharge he has to resort to another agent, a solution of boric acid in alcohol being dropped into the ear after each douching. He is not afraid of a 10 per cent. solution of cocaine, which he employs, as do we, in excising the new membrane, which he keeps in contact with the membrane for a few minutes. In making this section, which he does several times if necessary, he differs in his methods as follows:—The section of the extra membrane is made first with a sharp pointed knife and completed with a blunt one. When half of the circumference has been divided, the relaxation of the membrane makes the completion of the section difficult. This he states may be overcome by making a second puncture close to the original starting point, and completing the section by carrying the knife in the opposite direction. The fragment is then held at two points only and is easily detached with the forceps.

In plethoric patients he considers it necessary that the diet should be restricted for a few weeks before and after the removal of such a membrane, and he thinks this aids very much in preventing complete closure of the artificial opening. In conclusion he states:

"In the technique of the operation I am aware that I have differed somewhat from other writers. In the division of the incudo-stapedial articulation, I prefer to press the shaft of the knife closely upon the antero-internal aspect of the long process of the incus and cut downward, completing the division if necessary by cutting from below upward with the point

of the instrument, rather than pressing the knife against the posterior aspect of the long process of the incus, as is often advised. My reason for this is that the field of operation is in much better view in the former case than in the latter.

In removing the incus, the method described is the reverse of that advocated by Kretschmann (*Archiv für Ohrenheilkunde*, vol. xxv., p. 192), who was the first to formulate this procedure. This surgeon devised an incus hook with a double curve, the distal extremity being cup-shaped. To remove the incus, the bent part of the instrument was carried into the fornix, the distal extremity looking backward. Rotation of the instrument backward upon the axis of the shaft, carried the cup-shaped end of the hook over the short process of the incus, thus bringing the ossicle into view. In my hands, this method has not succeeded as well as using the simple hook already mentioned, and carrying it in the opposite direction. It certainly would seem that backward rotation would be more likely to dislocate the ossicle into the mastoid antrum, than manipulation in the opposite direction."

TRIONAL: ITS RANGE OF APPLICABILITY.

SAMUEL WOLFE A.M., M.D.,* PA.

In casting about for an hypnotic we have the ideal in view. We look for a substance which while easily administered, will promptly produce sleep in all respects like the normal and for about the normal period, and which will make no deleterious impression upon the system in any way.

So perfect a drug would imply, so to speak, a perfect pathology of the symptom, insomnia. That this is more true in an abstract sense than is generally admitted, I am inclined to believe. Whenever that portion of the nervous system involved in the maintenance of consciousness is active when in the normal course it should be inactive, the immediate cause, if the physiological theory of sleep is correct, is the continuance of too active and too voluminous a blood supply to the tissues concerned.

A drug that will regulate this disturbance will prove a true hypnotic. That its power to do so will depend largely on the given cause of the hyperæmia, is a foregone conclusion. Where fever and pain are absent or trifling in degree, Trional and other drugs of the same class seem either to reach the cause or in some other way abolish the symptom. That they do it by overcoming the hyperæmic condition rather than by directly stupefying the cortical cells is, from the observation of the normal quality and quantity of the sleep produced, a rational conclusion.

The superiority of Trional in promptness, ease of administration, and absence of bad or disagreeable after-effects, over most, if not all, other hypnotics, seems fairly well established.

When a dose of fifteen grains is given, sleep usually ensues within a half hour, if at all, and this result seems but little altered whether the drug be administered in a warm vehicle (it does not readily dissolve), or given as a dry powder, or in capsules. It is indeed often so prompt that the patient sleeps within a very few minutes after injection. The dose in some cases must be larger than fifteen grains, although I should not advise more in any case unless the susceptibility of the patient had been first ascertained and in many cases I believe ten grains would prove efficient. It may be safely repeated at least once in a night, and in an hour if necessary.

As to disagreeable after-effects, some of my patients have complained of a feeling which they are hardly able to describe, but while it may be an approach to vertigo, I gather it is rather more closely akin to the sensation which is experienced when we are obliged, though intensely sleepy, to keep awake for some reason not very forcible or agreeably stimulating. It has usually oc-

* Physician to the Philadelphia Hospital, Neurologist to the Samaritan Hospital.

curred when proper composure and disposition of the body has not been attained in time to yield freely to the effects of the drug. A feeling of drowsiness during the following day has in a few instances out of quite a large number of observations, been noted. This again is very much like the feeling which normally follows an ordinary good night's rest after a number of previous nights have been sacrificed.

In the following cases the dose was in each instance fifteen grains—unless otherwise specified and was always given at bedtime.

Mrs. O., aged forty-two, since her husband's death some weeks before, had lost her appetite and suffered from globus and sleeplessness. There was no cardiac murmur but the first sound was decidedly weak. In this case, as in several others, the dizziness alluded to, occured. She slept well after each dose.

Mrs. S., aged twenty-nine, who had had an ovariatomy performed a year ago and eight weeks since another gynecological operation of which I did not learn the nature, was dominated by some imperative ideas which caused her to dread going alone into the front room of her house, and to tremble with fear at the sight of a funeral procession. She had a tender abdomen, obstinate constipation, and slept only two or three hours in a night. A few nightly doses with the use of cod liver oil and tonics and proper attention to the bowels, started her at once on the road to improvement.

Mrs. R., widow, aged forty, with three noisy and ill-behaved children, suffering with a neuritis the result of a fall, gained the rest which had long failed her with the first dose.

Mrs.——, aged sixty-three, widow, had an aortic murmur, dilatation of the stomach, some pulmonary œdema, and partial suppression of urine. Sleep had been poor for weeks but came promptly with the use of Trional.

Mrs. McK., aged twenty-three, had slept poorly during the last weeks of her gestation and continued to do so after labor. The first dose failed but the second, on the following night, succeeded.

Mrs. L., widow, aged forty-seven, with cardiac hypertrophy, chronic pericarditis, loud mitral murmur, bed-ridden for several months, slept well on Trional. Bromides, stimulants, and antispasmodics had been used before with indifferent success. Trional was administered only every other night. After some three or four doses had been used in this way, she experienced a severe attack of cardiac depression (she had before had a number of milder attacks.) Trional, however, had not been taken on the night immediately previous to this attack, but the possible influence of it as a causative factor would nevertheless seem to point to caution in its administration in a case of so extensive heart lesion.

Mrs. E., aged thirty-two, always a poor sleeper, was suffering from very violent headache, which had been preceded by an acute coryza and was accompanied by neuralgic pains in the sciatic nerve, from which she often suffered. She took during the night Trional, and during the day:

Potass bromid.....	ʒ iij
Tr. cannab ind.....	f. ʒ iij
Rxt. ergot. fid.....	f. ʒ ij
Syr. acac.....	f. ʒ ij
Aquae, q.s. ad.....	f. ʒ vj

M. Sig. One tablespoonful every three hours.

She was completely relieved in forty-eight hours.

Miss E. F., aged forty-seven, had been for some months under treatment for vague nervous symptoms, including a girdle sensation and various paræsthesias of the lower limbs. Her sleep was poor. She described the feeling just prior to going to sleep as "very queer." and was drowsy all next day.

Miss A., aged forty, a neurasthenic with frequent neuralgic and migrainous attacks, had some wheals of urticaria which she feared would result in another severe attack such as she had a year previous and which had proved extremely rebellious to treatment. She took Trional for two nights in succession, with three grains sodii salicylas, three times a day, and promptly aborted the attack.

J. C., male, aged thirty-two, in an advanced stage of pulmonary tuberculosis with a neuritic palsy of the serratus magnus muscle, had just passed through several slight hemorrhages. He slept very soundly under use of Trional, but was very drowsy all next day.

Miss D., aged twenty-three, always a poor sleeper, was suffering from the depression of influenza. She slept soundly on Trional.

G. S., male, aged forty, was in the period of delirium and hallucinations of sight of his first attack of delirium tremens. He was extremely tremulous and his urine was loaded with albumen. His appetite had been very poor for months before the attack, which resulted from steady hard drinking rather than from occasional debauches. His sleep too had been extremely poor. The Trional failed entirely, though repeated within an hour, and later in the night one-quarter grain of morphia was used hypodermically and succeeded in producing sleep. A few nights later, when the delirium had almost entirely subsided but the sleep had not yet become established, twenty grains of Trional succeeded admirably and no further medication was required in this direction.

Mrs. D., aged thirty-nine, of an hysterical diathesis and suffering great nervousness and depression from anxiety about a very sick daughter, slept fairly well on taking fifteen grains of Trional.

Trional was also given in a variety of conditions in smaller doses with a view of ascertaining what other properties besides those of an hypnotic, it might possess.

In a number of the milder cases of la grippe that presented, where the main symptoms were a decided nasal and pharyngeal catarrh, doses of one to three grains every two or three hours when used alone, seemed to speedily dissipate the symptoms, but when combined as in the following formula, acted still more efficiently especially in such cases as had subsided into a subacute form, or where a chronic catarrhal affection had been exaggerated by the epidemic influenza.

Quin. Sulphat.....
Trional.....
Salol.....
Camphora..... } āā gr.x.

M. et. in capsul. no. X div.
Sig. One capsule four times a day.

It will be seen that the quinine and salol were given in too small a dose to have much efficacy alone; while it must be admitted that camphor is usually a very excellent medicament in the more acute cases of this kind in the dose used. I am, however, inclined to think that the combination is more useful than is any one of the drugs singly, and this too with a full experience in the use of the older ones.

In a case of severe chorea, which the mother said had existed since infancy the boy being seven years of age, quite remarkable results were achieved by the administration of four grains t.i.d., for two weeks. Fowler's solution had been tried for the same length of time without any appreciable result. The patient being a dispensary case, has not returned, so that the further result remains in doubt. In another case of chorea, a girl of four, three grains, four times a day, failed utterly to do good.

A woman of sixty, with a heart murmur, had also been for some months afflicted with a brachial neuritis, which periodically became intensely painful and required occasionally the use of opiates. She was very promptly relieved in her last attack, and apparently more permanently than previously by:

Quin. sulph..... grs xx
Trional..... grs xxx
M. in caps. no x div. Sig. One every three hours.

It should be stated that quinine, phenacetine, acetanilid, salol, and other analgesics, had been freely used in former attacks.

I think myself fully warranted in coming to these conclusions:

1. That Trional deserves a high rank amongst hypnotics.
2. That it has a useful range of application in catarrhal inflammations.
3. That it deserves trial in neuralgic and myalgic affections.
4 That it may be found useful in chorea and other neuroses.

Prostatitis.

Ichthyol..... 0.5
Ext. bellad..... 0.15
Butyr. cocao..... 15.0
M. f. massa, ex. qua. formentur. Suppositoria x.
Sig. To be introduced once or twice a day after a movement of the bowels.

Ammo. sulfo-ichthyolic..... 0.3–0.6–0.75
Ol. cacao..... 2.0–2.5
Misce exactissime f. suppositorium.
Sig. Used as a rule twice every day, one in the morning after a movement of the bowels, and one in the evening before going to bed.

—*Times and Register.*

To Relieve the Thirst of Diabetics.

Pilocarpin nitrat..... gr. ss.
Spirit vini dilut..... m. xx.
Aquæ..... ℥ i.
M. Sig. The tongue is to be moistened with 5 or 6 drops of this solution four or five times daily.

Uremia.

Tinct ferri chloridi..... ℥ ss
Spiritus aetheris nitrosi, Lid ammoni. acetatis } āā ℥ i
Aquae destillatae..... ℥ iiss
M. et fiat mistura. Sig. Tablespoonful in a wineglass of water.

DIFFERENTIAL DIAGNOSIS OF ROTHELN, ROSEOLA, MEASLES, AND SCARLATINA.*

H. J. WARMUTH. M.D., SMYRNA, TENN.

Nothing in the whole domain of pædiatrics has produced so much perplexity or worry to the mind of the medical man, as the difficulty often experienced in forming a correct and satisfactory diagnosis between rötheln and the other eruptive fevers in question; not so much on account of the treatment, which in either case cannot be of any possible harm to the patient, but on account of a forced and needless isolation, which necessarily must entail loss of time and money upon the parents of the patient or upon the patients themselves.

Rötheln has been frequently mistaken for roseola, and various writers have given a very correct description of the latter under the false synonyms of "Rose-rash" and "Roseola epidemica." When we consider the fact that roseola is a non-contagious dermatitis while rötheln belongs to the class of eruptive fevers which are more or less contagious, we cannot understand how some writers can advance the theory that roseola will, under certain conditions, assume an epidemic character, become contagious, and acquire the power of self-propagation.

Rötheln—rubeola, or "German measles," or "false measles,"—has been known and accurately described in the United States as far back as 1845. This malady seems to have its appearance first in Boston, then in New York, and from that city it has spread all over the country.

It is a hybrid, an intermediate between measles and scarlatina, and yet distinct from either in that it does not confer immunity against either of these diseases. In some epidemics it partakes of the character of measles, while in others it resembles scarlet fever, and in yet other instances it stimulates both, rendering a diagnosis extremely difficult.

In very mild cases the prodromata are wanting, or so mild as scarcely to attract attention. In some epidemics, however, nausea and vomiting, slight catarrh, sore throat, and especially an enlargement of the glands of the neck back of the sterno-cleido-mastoideus, which is characteristic of rötheln, form the initial symptoms. In from six to twelve hours, with an increase of fever (which scarcely ever exceeds 101° or 102° F), a rash appears upon the forehead, around the ears and along the neck, and, traveling downwards, soon spreads over the rest of the body.

The eruption is characterized by numerous small points thickly set, or circular spots or blotches, of a color intermediate between the scarlet of scarlatina and the dusky red of measles, while between the borders of the rash the skin presents a normal appearance. In exceptional instances the intervening spaces assume an erythematous redness, resembling the efflorescence of scarlet fever. With the exception of the scalp, the plantar and palmar surfaces, the exanthem will appear upon any part of the body and is always accompanied by incessant itching. The rash disappears by the fourth day; in warm weather it remains longer. When mild or idiopathic, it leaves a brown spot; when simulating measles, desquamation is followed by a branny exfoliation of the epidermis; and in the scarlet fever variety, desquamation consists of small scales but never of shreds or flakes.

The attack terminates within a week and complete recovery takes place within twelve or fourteen days. Complications are not frequently met with. As a rule there are no sequelæ, although I, Lewis Smith and other writers, mention chronic bronchitis, enlargement of submaxillary glands, albuminuria, and dropsy.

From roseola it can best be distinguished by the simultaneous appearance of fever and rash in this affection; the absence of catarrhal symptoms and of glandular enlargement.

The diagnosis of rötheln from measles or scarlatina for the first two or three days

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is often difficult, sometimes impossible. The croupy cough appearing three days before the rash, the severe catarrhal symptoms, the very red conjunctiva with marked photophobia, are characteristic of measles. The short duration of prodromic symptoms, the shivering, the excessive headache, and especially the vomiting and sore throat before the appearance of the eruption, distinguish scarlatina from rötheln, whose premonitory symptoms are either very mild or wanting.

The temperature in measles ranges as high as 104° F, with an accelerated pulse, which is in proportion to the temperature; in scarlatina it reaches sometimes 106°

DIFFERENTIAL DIAGNOSIS.

	RÖTHELN.	ROSEOLA.	MEASLES.	SCARLATINA.
Prodromata.	Wanting or very mild. Sometimes slight catarrh; sore throat; enlarged glands; nausea and vomiting.	None. Rash and fever appear simultaneously.	Malaise; severe catarrh; watery eyes; photophobia.	Shivering; headache; hot skin; vomiting; sore throat.
Period of incubation.	9-21 days.	None.	10-14 days.	4-10 days.
Occurrence of eruption.	6-12 hours.	Fever and rash appear together.	3-4 days from onset of fever.	2-3 days from fever.
Character of eruption.	Small, dark, rose-colored points, sometimes like measles, but lighter; at other times like scarlatina; with normal skin between margins. Appears first behind the ears, forehead, face, etc, and travels downward.	Small rose-colored papules slightly elevated. Scattered over chest, neck, face, abdomen, and sometimes over the rest of the body.	Papular in character, like flea-bites. Of brick red color. First on forehead, ears, face and gradually extending over the whole body.	Bright scarlet dots, which coalesce without leaving normal skin between borders. First on chest, neck and face, and gradually invading the rest of the body.
Pulse and temperature.	In proportion to temperature, which ranges from 100-102 degrees.	Quickened. Normal; seldom 102 degrees.	Quick, but bears a ratio to temperature, which ranges from 101-104 degrees.	Very fast, and out of proportion to the temperature, which often reaches 105-106 degrees.
Eyes.	Pinkish red.	Not affected.	Red, watery. Photophobia.	Very red
Tongue.	Furred.	Slightly furred.	Furred, but not coated.	Strawberry tongue.
Fauces.	Red.	Little injected.	Dark-red and swollen.	Dusky-red. Very much swollen.
Condition of bowels.	Normal.	Normal.	Diarrhœa.	Normal; occasionally constipation.
Kidneys.	Rarely affected.	Not affected.	Not affected.	Nephritis and albuminuria frequent.
Glands.	Affected from beginning.	Not affected.	Bronchial glands always enlarged.	Enlargement after a few days of fever.
Desquamation.	Brown spot; when like measles it consists of a branny exfoliation, and when simulating scarlatina it consists of small scales.	Leaves a distinct discoloration; seldom followed by desquamation.	Furfuraceous exfoliation of epidermis.	Peels off in flakes or shreds.
Contagiousness and Duration of same.	Feebly contagious. 10-14 days.	Not at all. 24 hrs.-3 days	Contagious and infectious. 14-21 days.	Very contagious and infectious, and Lasts as long as desquamation, and longer.
Sequelæ.	None.	None.	Ophthalmia. Affection of organs of respiration, Diarrhœa.	Nephritis, endocarditis, suppuration of glands, etc.
Termination.	Recovery.	Recovery.	Recovery, but sometimes followed by bad health.	Recovery; frequently retarded by sequelæ.

F, with a pulse greatly quickened but out of proportion to the height of the fever; in rötheln the temperature rarely reaches 101° or 102° F, and the pulse bears a ratio to the temperature.

In measles the bronchial glands are enlarged; in scarlatina an enlargement of the glands of the neck takes place after the first few days of fever; and in rötheln it is present from the very beginning of the attack, especially back of the sterno-cleido-mastoideus.

The eruption in measles is more of a brick-red color, papular in character, like flea-bites, and appears on the third or fourth day of the fever. In scarlatina the skin is swollen and unusually hot to the touch; the rash consists of small points of a bright scarlet color, more intense at the center and gradually fading from center to circumference; it becomes confluent by its borders, without leaving any skin of normal appearance between, and appears on the second day of fever. In rötheln the dark-red, rose-colored points may coalesce into patches, but the skin between the margins presents a normal appearance.

In measles and in rötheln the tongue is slightly furred, but in scarlatina we find the characteristic strawberry-tongue which is formed by the projection of the enlarged red papillæ through a thick, white fur.

The fauces in measles are very red and swollen; in scarlet fever they are dark-red, very much swollen and frequently covered with a white tenacious mucus, and this throat affection is always in proportion to the eruption; but in rötheln, though the fauces are red and slightly swollen, they are dry.

While diarrhœa is characteristic of measles, the kidneys are not affected; in scarlatina there is no diarrhœa, but albuminuria and dropsy; and in rötheln the bowels are not disturbed, but the kidneys may become, though rarely, slightly affected.

In measles desquamation begins on the seventh day of fever and consists of a furfuraceous exfoliation of the epidermis; in scarlet fever a peeling of the scarf skin in large flakes or shreds begins on the fifth day; and in rötheln desquamation consists of small bran-like scales.

Measles and scarlatina are both contagious and infectious, while rötheln is feebly contagious.

The duration of infectiousness in measles lasts from fourteen to twenty-one days; in scarlatina as long as desquamation lasts and even longer; and in rötheln from ten to fourteen days.

The sequalæ in measles are ophthalmia, chronic diarrhœa, and various affections of the organs of respirations; in scarlet fever, otitis, nephritic troubles, endocarditis and suppuration of glands; and in rötheln practically there are none.

The termination of all three exanthematous fevers is towards recovery, and only in severe cases of measles and scarlatina does death intervene, or an attack is followed by bad health.

Typhoid Fever in Infants.

1. Typhoid fever occurs more frequently in children than is generally supposed.
2. The fact that ulceration and hemorrhage is much less frequent would explain the absence of pronounced abdominal symptoms.
3. The erratic, undeveloped and hypersensitive nerve centers in early child life explain why the toxic secretions of the Eberth bacillus should make cerebral symptoms very pronounced.
4 Given a child of any age with or without intestinal disturbance, with a continued elevated temperature, with or without marked evidence of cerebral disturbance, the possibility of the presence of the Eberth bacillus of typhoid fever should be constantly kept in mind.—*Journ. Am. Med. Assoc.*

Bacteriological Examination of the Vaginal Secretion During Pregnancy.

With a view to determine the presence or absence of germs in the genital tract of the pregnant patient, where no possibility existed of contagion, Krong (*Deutsch. Med. Woch.*) has made a series of examinations in the Leipzig clinic. He had forty-eight cases, and his results show that the natural resisting power of the tissues is the same to both spores and cocci. Sreptococci were killed in a very short time. Two days is the longest time in which germs introduced within the body remained alive. The genital tract is aseptic in healthy women when from forty to seventy-two hours have elapsed since the last examination.—*Am. J. M. Sci.*

DIFFERENTIAL DIAGNOSIS OF THE ERUPTIVE FEVERS, WITH SOME OBSERVATIONS ON EPIDEMIC AND ENDEMIC INFLUENCE IN THEIR PREVALENCE.*

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They are similar in that each has a period of incubation, a period for the fever, and other symptoms prior to the eruption, and a time for the eruption and decline.

Variola or small-pox is the most virulent of the contagious diseases when the people are not protected by vaccination. I believe that vaccination of the greater number, together with modern sanitation, modifies it greatly among those who have not been vaccinated. The incubation is from seven to twelve days but has been known to reach twenty. Intense frontal headache, intense lumbar pains, and aching limbs are peculiar to small-pox. They are more excruciating in this than any of the eruptive fevers. Frequently there is persistent vomiting. On the first day the temperature rises rapidly to 104° or 105° F. The face is flushed; the eyes bright and clear. There may, or may not be delirium, which is dependent on temperament and brain sympathy. Convulsions are not uncommon with children. In a few cases, on second or third day, certain rashes appear which are well calculated to lead the attendant astray as to measles or scarlatina. The throat is oftentimes quite sore. Cough may be present, but is not a prominent symptom.

The eruption appears from the third to fourth day of the initial fever. It is a red spot with a shot-like feeling. It shows first on the forehead near the hair, and also on the wrists. Within twenty-four to thirty-six hours it may be seen on the chest and limbs. The red spot develops into a vesicle, which soon becomes umbilicated and ends in a pustule.

As the eruption comes out the fever cools and the pulse and temperature become normal for one or two days, but when the papules vesicate, the fever rises the second time.

Rubeola or measles also has an incubation of ten or twelve days. Fever runs four to five days before the eruption appears. It is not so high as in small-pox. It does not cool with the eruption, but continues until convalescence. Patient feels chilly, has head-ache, back-ache and pain in limbs, not so severe, however, as in small-pox. There is sneezing, cough, free nasal discharge and copious lachrymation. Conjunctiva red, some redness in throat, huskiness of voice, and soreness in chest.

The rash appears on the cheek or forehead about the fourth day, sometimes later. It is a small red papule which may coalesce with others. The cuticle of the face is thickened. The eruption passes from the face to the body, thence to the limbs, occupying three or four days; disappearing on the face as it comes out on the feet.

Let us compare the semiology of small-pox and measles.

SMALL-POX.	MEASLES.
Fever cools on eruption and returns again.	Fever never cools until convalescence.
Eyes clear and bright.	Eyes red, suffused and watery.
Excruciating pain in head, back and limbs.	Pains not so severe.
The mucusa of eyes, throat and lungs not much involved.	Mucosa of eyes, throat and chest all catarrhal.
Papules shot-like; change to vesicles and then pustules.	Papules only thickening of the skin, no vesicle, no pustule.

In scarlatina the incubation is variable from three to ten days. Peculiar to childhood under ten years, though adults may have it. No special marked symptoms or prodromata.

The throat usually has a scarlet blush before the eruption, and the papillæ stand out prominently as red points dotted over a white coated tongue.

The fever does not precede the eruption more than two days, and frequently only one. It is intense, reaching a temperature of 104 or 105 degrees, with a pulse-rate of 120 to 150. The fact that it attacks children, the throat complication without catarrhal symptoms, together with the rash, which is a scarlet blush developed from little red points apparently under

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the skin, reminding one of goose-flesh, and the paling of surface on gentle pressure with the finger, gradually returning from the outer margin to the center when the finger is removed, are sufficiently characteristic to differentiate it from the other exanthemata.

Varicella or chicken pox, is a disease of child-hood but grown people have it. It is not a dangerous disease and becomes important only from its similarity to small-pox. It has an incubation of ten or twelve days; fever only twenty-four hours, when slight papules form on chest and may then appear on different parts of the body. After three or four days these dry into a small black scab without pustulation, or umbilication as in small-pox.

Rubeola, or rötheln, has many marked similarities to measles, and it is even now a question with many as to whether it is entitled to a distinct name. Some competent observers believe that it is a hybrid of measles or scarlatina.

The stage of incubation is placed by different observers at from five days to three weeks. The eruption frequently appears without premonition. It differs from the ordinary type of measles by beginning on the face and spreading rapidly over the whole body. Patterson claims that it makes its appearance simultaneously over the whole surface. The eruption is sometimes scant. Griffith saw it in circular bands above the knee. It disappears in twenty-four to thirty-six hours.

It differs from scarlatina and measles in the light character of the fever. The sore throat and facial catarrh are always present, but very mild. It differs from measles in the involvement of the lymphatic glands. The cervical, occipital, submaxillary and sublingual glands are affected in more than fifty per cent. of the cases. Sometimes the axillary and inguinal glands are swollen.

The light rose color of the eruption, its early disappearance in from one to two days, and the more extensive affection of the glandular system, with the fact that the symptoms gradually subside from the appearance of the eruption, distinguishes it from scarlet fever.

I notice that these diseases now and then prevail as epidemics. This is not only true with regard to the exanthemata by which one attack renders the subject immune for life, but it is also true of cholera and la grippe, the two latter not bringing immunity from a second attack. I notice further that there is oftentimes an interim of five to ten years in which the people seem to be immune from any given one of these diseases. I claim that the great mass of the people are immune for the period of this interregnum, because I take it as an accepted fact that they do not originate *de novo*, let the cause be what it may.

I have observed further, that when one of these epidemic diseases has had its day, it is rapidly succeeded by each of the others until all have passed in review.

It is also a fact that when one of these maladies is prevailing, whether as an endemic (which I think is now accepted to mean only a more limited number of cases or to compass a smaller territory), or whether as an epidemic, the others all subside. That is to say the prevalence of one of these diseases renders immunity, for the time, from the others.

I know that cases have been seen, where two diseases were incubating in the same person, at the same time, and that the one became latent until the first had its course, and then became active. This seems only to prove that the causes of the two could not coalesce, but that both retained their identity and the more potent one ran its course first, holding the weaker in abeyance for the time being.

This does not disprove my proposition that there is such a factor as an epidemic influence which becomes wide-spread and prevails over states, continents and hemispheres at the same time.

Such were the facts two years ago, when small-pox prevailed as an epidemic in thirteen of the States of this Union, and at the same time was in England, France and Russia. Just preceding that, la grippe was gripping the people all over the United States and Europe. Since that time, as small-pox is yielding the field, scarlet fever is frightening the mothers of this country.

It cannot become so extensive because its class of subjects is limited by age.

One of the theories for natural immunity is the phagocytic, as set forth by Metchnikoff. It has been claimed to have a wider applicability than any other solution of this question.

The phagocyte is a white corpuscle which has the power of absorbing and

destroying bacteria. When the system would be infected with the particular bacillus or micro-organism having the power to produce one of these specific diseases, the amocloid cells, or white cells, absorb and destroy them either by digestion or a chemical process in the interior of the cell or corpuscle. Thus the leucocytes or white corpuscles of the blood, become, according to this theory, the defenders of the body against the myriads of bacteria..

We have also the humoral theories of immunity, which attribute germicidal force to the blood and fluids of the body.

Nuttall demonstrated the power of the blood to destroy bacteria. It seems to be established that the greater germicidal power of these fluids is in the serum of the blood. It is further claimed that this bower is stronger in the serum of some animals than of others. Upon these supposed facts the blood serum therapy is now being tried. Without accepting or rejecting, I will say that I have no doubt much good will be developed from these investigations.

While it may or may not be true that the microbic theory of the etiology of diseases, is correct, I am sure that the cause for these epidemic diseases, whatever it may be, is existing continuously. I think power for resisting these diseases or the susceptibility to them cannot be found within, either in the blood or other vital forces of the body.

There must be certain external influences or environments which render the system susceptible.

This may be illustrated by gathering a regiment of a thousand men from the walks of civil life and putting them into camp. Measles and small-pox will soon appear among them and become epidemic. Not only so, but they will be subject to nearly all the epidemic diseases.

This is an endemic influence begotten of their changed habits and surroundings. While it is true a case now and then will be found among the people outside the encampment, yet it never becomes epidemic outside the camp, or if it should, it would not be from the nidus of the camping ground.

From these observations I conclude that there are long periods of time when the people are immune naturally, from one and all of the zymotic diseases. Also that this natural immunity from one is at the same time an immunity from all; which, if true, may be taken as proof of the unity in kind of the etiology of them all.

DIGITALIS.*

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If human existence is ever prolonged by the use of a drug—and the question, to say the least, is debatable—digitalis stands at the head of the list. But there is not a therapeutist living who can point out a drug, or a combination of drugs, that can *at all times*, be relied on to fight disease to a successful issue. We have nothing in medicine that we dare pin our faith to, unless we are riding a hobby, and hobby horses notoriously are uncertain animals.

Looking over the whole category of acute diseases, it is absurd to say you can abort any of them by the use of drugs, or that we have any known remedy which acts directly on the exciting cause, whatever that may be. All we can hope to do is to second our patients with bottle and sponge, clear the ring and give nature a fair fight—never forgetting that depressing measures, except in a very few cases, will impose a handicap on our patient that may cause the fight to be lost.

In chronic heart disease, whether affecting the heart muscle itself or the valves, digitalis and rest in the recumbent position are about the only remedies worth mentioning.

A cardiac murmur, whether loud or soft, unaccompanied by any other symptoms of a deranged organism, demands no treatment whatever, unless it be some advice regarding over-exertion or violent exercise. It is only when signs of failing

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compensation occur that active treatment is needed. I recall vividly when in my early college days as I listened in awe to the learned dissertations of my instructors on little weak, scrawny murmurs, I stood in such fear of abnormal sounds that I could always hear the creaking of the graveyard gates as I auscultated the hearts of the poor unfortunates. It is not the murmur so much as the force of the cardiac impulse which should put us on our guard. To say that digitalis should be used not at all or very carefully in some forms of heart disease, applies to any drug that is capable of affecting the system so powerfully.

But I wish particularly to speak of the use of digitalis in acute disorders—principally diphtheria, typhoid fever and pneumonia. Let us glance at the physiological action of digitalis upon the circulation. The first effect noticed is a decided decrease in the number of heart-beats, due to an increased period of diastole. The systole is increased in force so that the ventricles become pale or white as the blood is squeezed out of them. This complete systole drives out all the venous blood from the heart muscle. The coronary arteries arise at about right angles to the aorta, and as the latter fills during systole the blood passes into the aorta in an unbroken stream, and probably little blood enters the coronary arteries at this time. But when the reflex wave causes the aortiic valves to close, the blood rushes into the coronary arteries with all the force of the increased arterial pressure, filling to their utmost capacity the cardiac arterioles supplying the life-giving oxygen to the hardest worked muscle in the body, feeding the nerve centers existing in the heart, and taking out the carbon di-oxide and debris of combustion.

In disease, the feeble heart is unable to free its walls of venous blood during systole; the systemic arteries are not filled sufficiently to produce a reflex wave strong enough to fill the coronary arteries, and the weakened muscle becomes still weaker from starvation. More than this, the lack of properly oxygenized blood to the muscle-wall tends to paralyze the peripheral inhibitory centers and allows the accelerator fibres of the sympathetic to drive the heart to its death.

I quote H. C. Wood: "Digitalis in moderate doses stimulates the musculomotor portion of the heart, probably its contained ganglia, increases the activity of the inhibitory apparatus and causes contraction of the arterioles, probably by an action on the vaso-motor centers in the cord, and also upon the walls of the arterioles.

"In consequence of the first action the cardiac beat becomes much stronger, as the result there is narrowing of the blood paths, and to the passage of the vital fluid an increased resistance, which acting on the already excited inhibitory system tends to slow the pulse."

I might also speak of digitalis as a mild antipyretic, and I am convinced that it has such an action even though it is feeble. But antipyretic drugs should have no place in the treatment of acute disorders. What can not be accomplished by the use of external cold cannot be safely accomplished by internal medication.

I suppose it would be considered rank heresy to leave out antitoxine in considering the treatment of diphtheria. And yet it savors strongly of quackery to imagine that a dram or two of serum in one or two thousand times that amount of blood will effect a cure. Before the Ides of March of another year shall come and go, the immunized horses of to-day will be relegated to the garbage carts.

A large percentage of the deaths from diphtheria are due to paralysis of the heart; heart-clot the result of cardiac failure; pulmonary congestion, the result of a weakened heart; and pneumonia. All are conditions indicating the use of digitalis. The heart beats may be excessively slow, as in paralysis, extremely rapid, or intermittent.

In all of these conditions, cardiac stimulation is demanded. Alcohol is probably of the most service when there is profound shock due to systemic poisoning—strychine, when there are any symptoms of paralysis. But each of these drugs should be combined with digitalis. In the first place it steadies the heart, allows the blood time to become thoroughly oxygenized in the lung, and as oxygen is of the greatest value in all adynamic conditions, the necessity of ridding the blood of its carbon-dioxide is evident. In the second place, the heart increases its own supply of blood through the coronary arteries and thus puts itself in better condition to

fight the coming weakness. And last but not least, it is a stimulant to the pneumogastric nerve. This action undoubtedly has a tendency to prevent the paralyses that so often follow attacks of diphtheria. After vomiting has been controlled, in all except the mildest cases, small doses of digitalis should be given, twice or three times a day. If any indications of cardiac weakness occur or cyanosis comes on, even if due to mechanical obstruction, among other remedies, increase the dose of digitalis. The drug should be continued in small doses until the end of convalescence.

In typhoid fever I have found digitalis of the greatest service, not so much in the first and second weeks, as later in the disease. In the earlier stages of the disease, with a fair ratio between temperature and pulse-rate, the heart acting regularly with a good first sound, stimulants of any kind will do more harm than good. But if the heart is irregular in its action, pulse out of all proportion to temperature, with a weak first sound, than digitalis is indicated. This condition, I believe is due, partly at least, to a poisoning of the inhibitory centers of the brain which allows the accelerator nerve to drive the heart so rapidly. You will often find in this condition a general nervous unrest, twitching of the muscles, of the face and of the limbs, inability to bear noises, and sleeplessness. I have seen digitalis act with the happiest results in such conditions—usually given alone, sometimes combined with the bromides. This quieting action of digitalis is due to an increased blood supply and of a better quality to the nerve centers, and also to a stimulation of the pneumogastric nerve.

We have the same action shown in the quieting effects of the drug when given in large doses in delirium tremens. Later on in the disease, say after the fifteenth day, 75 per cent. of all cases are benefited by digitalis—given probably once, twice or three times in the twenty-four hours. The tincture should always be used, given in from two to twenty drops, as often as indicated. The dose should always be regulated by its action on the heart. If the heart is rebounding strongly against the chest wall, lessen the dose or discontinue the drug entirely for a day or two. Harm may be done by an excessive action. The aim should be to attempt to keep the heart acting in proportion to the action of the rest of the sick body. Do not expect a weak heart in a body emaciated perhaps to the last degree, to act as strongly as in health. But keep up a gentle, stimulating, tonic effect on the heart muscle and inhibitory centers.

You may be assured that you will always have a resultant action from the use of digitalis, and whether that effect does good or harm depends entirely on the skill with which you administer it. It is true that in typhoid fever the heart as well as the muscular system generally, may undergo degeneration changes. But you rarely find a general fatty degeneration of a waxy character in the heart muscle. It is usually granular, affecting small patches alongside of which are healthy fibers that have undergone no degenerative changes whatever. Instead of digitalis being contra-indicated in this condition, it may be of the greatest service. For there is no doubt but that a longer diastole, which means a longer sleep for the tired heart, with its stronger systole and concomitant better blood supply, will tend to lessen the area of fatty degeneration. More than this, the better oxygenated blood circulating throughout the system will improve the general tone of all the organs.

There is, probably, no one disease which has been treated with such a variety of methods as pneumonia. Each method, of course, followed by a large proportion of recoveries. It is, I think, generally recognized at the present time that pneumonia demands no special treatment, but that each case must be treated on the symptoms which it presents.

In a strong, robust man or women, with a hard, rapid pulse, depressant measures, bleeding included, may be of the greatest value. But the great majority of cases the average practitioner sees are the pneumonias of children and not overly robust men and women—often those of low vitality. These are the cases that demand plenty of easily assimilable food, tonics and stimulants, of which digitalis is easily the most important.

It has not been proven that we can prevent the progress of pneumonia by any known method, or hasten a cure by any drug. There is also no doubt but that many *active* measures designed for the relief of the congested lung and to limit the area affected, do but sap the vitality of the patient and handicap nature in her

heroic efforts to heal. We should never forget that the vital elements which constitute life are always, even in health such civilization gives us, struggling for existence. They never pull down, they are ever striving to build up.

The treatment of the second stage of pneumonia is essentially one of stimulation. Digitalis is the drug that meets these indications and meets them more efficiently than any drug or combination of drugs in the pharmacopœia. It tends to prevent overdistention and paralysis of the muscular fibers of the right heart. It empties the ventricles and itself of all its blood by a complete systole; steadies the heart muscle by the action on the heart itself, but mainly by its stimulation of the pneumogastric nerve. This nerve supplies motor fibers to the muscular coats of the entire bronchial system, including lobules and air cells; an important action in equalizing air pressure and preventing overdistention of healthy vesicles.

It must be apparent that digitalis, by its stimulation of this nerve, plays a most important *rôle* in respiration. The vagus also regulates the rhythm, keeping it working regularly. As is shown by section of both pneumogastrics in the neck, which diminishes the number of respirations to four or six a minute, until death finally occurs in five to seven days, we have from digitalis practically the same action on the respiration as on the heart. The breathing becomes fuller, steadier, stronger, the blood becomes more completely oxygenized, and the nerve centers, rallying with their fresh supply of oxygen, again take up the fight.

ETIOLOGY OF DIPHTHERIA.

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Spontaneous generation has long been disapproved. Bacteriology arose in its place. For a time it was thought that bacilli might be protean in form, and capable of transformation. It is now generally conceded that each reproduces its own kind, and causes its own disease. In some doubtful cases there may be similarity in appearance which has led to mistakes. Cultivation and inoculation tests decide the difference.

In this light, what is the immediate cause of infectious disease? The answer is ready, of course. The introduction and growth of a peculiar bacterium: variola from the germ of variola; scarletina from the infection of scarletina; and diphtheria from the introduction of the Klebs-Loffler bacillus. In the latter disease, as in the Parable of the Sower, many seeds fall by the wayside and are devoured by the phagocytes; others fall on stony ground and do not spring up; a few, unfortunately, fall on ground suitable to produce disaster.

It is not our purpose to describe the progress of the disease, but its beginning. Diphtheria starts in a hamlet or city, and prevails seemingly until the soil is exhausted. It sometimes remains in one locality for several years perchance, invades only certain streets. It finds its way to isolated farm-houses and is confined there, or it may spread to the neighborhood. It does not arise spontaneously in either case, nor does some harmless germ suddenly develop malignancy. The genuine bacillus has been carried there and found a soil in which to propagate.

In many cases, heretofore, it has been impossible to account for its coming; in some instances the manner is patent.

With our present knowledge we may know our enemy and put ourselves on our guard against him. These are facts for our consideration:

"Under favorable circumstances in culture tubes, the bacilli have been found alive *after seven months;* and on bits of membrane kept in cloth, still alive after six months."

Dr. Fischer, of New York, found true diphtheria bacilli in the sinks and traps of houses where diphtheria had prevailed.

In mild cases the bacilli are found in the nasal secretions and in the throat where little disease seems to exist, and after the disease has disappeared, as sup-

posed. This is particularly the case among members of a family that seem to be immune.

These facts cannot be too widely known and acted upon to prevent the spread of the disease. When the disease breaks out do not look for its origin in the sewer or the well—such is only the soil on which it is planted, the seed has come from some other source. It may be carried in clothing and on the person for several months. Disinfectants may be used in the most thorough manner, everything be destroyed that has come in contact with the disease, yet the bacilli may remain in the nostrils or throat, or about the person of those that have had the disease or have been in attendance, and thus be "mysteriously" transported.

It is a noted fact in this city, that as soon as cold weather sets in and winter clothing is taken out, we have cases of scarlet fever. The germs have been packed away in the spring in spite of disinfection, and are ready to spread themselves when unpacked.

Some years ago, we had after cold weather set in, an epidemic of diphtheria. It began at the bottom of one of the highest, dryest streets of the city. The disease went zigzag from one side to the other, missing some houses and striking others with violence, taking one or more wherever it went. It traveled to the bluff, a mile from where it started; forty out of a hundred died. This happened fifteen years ago, when few precautions were taken to prevent its spread. It appeared in only two or three cases off the one street; though the soil would seem to have been better in many other localities. There is only one fact that offered any explanation—it followed the route of a certain milkman.

A more recent outbreak observed was in a farm house a mile from any neighbor. Sanitary surroundings were much better than on the ordinary farm. A sister of the farmer, living in the center of the State, had lost two children with diphtheria; a third child did not have it. Disinfection had been thorough. No clothing, nor anything in the rooms had been saved. A month in another house had elapsed when she came to visit her brother. Here were four children. The little girl of the sister slept with the two older girls of the brother. In less than a week these were attacked with diphtheria and died. The other two children had the disease in a milder form and survived. Every precaution was taken, but in four or five months it appeared in another farmhouse—a relative. It stopped there.

The cause was supposed to have been a foul well!

REDUCTION OF LUXATION OF KNEE JOINT BY FORCIBLE EXTENSION.

A. O. STIMPSON, M.D., THOMPSON, PA.

D. J. S., an intelligent young farmer of this town, while prying up a large stone in the field with a crow-bar, injured his knee so that he could neither straighten it out nor even bear his weight upon it in an attempt to walk. When the accident occurred on May 17th 1886, he, thinking that his leg was broken, was brought to my office by a neighbor's horse and carriage in order to be treated forthe injury.

Learning the history of the accident and noticing that the pain was greatly aggravated on attempting to rotate the bones at the knee joint, I had come to the conclusion that the trouble was caused by a dislocation of one of the loose cartilages of the joint and that this had got pinched between the head of the tibia and the femur. I got my patient seated in an office chair allowing his injured limb to assume as easy a position as possible and then made an examination of the joint. I found it as immovable as if chronically anchylosed; but I soon discovered that a loose cartilage had been pinched and permanently confined between the head of the tibia and the extremity of the femur.

Rotation of the limb and heroic manipu-

lation did not alter the condition of affairs. I now placed his limb (which had continued to remain in a semiflexed condition) on another chair with his heel resting on the edge of it, then by diverting his attention from what I intended to do I suddenly pressed on this knee with my two hands, leaning my whole weight upon them. A loud snap (like a pistol shot) was heard, and subsequently the fellow could walk around the room as well as ever.

I must not, however, omit to mention that there was also a partial dislocation of the tibia forward, hence the rigid condition.

The cause of this peculiar surgical deformity is easily understood when it is known that this man used his leg (twisted around the crowbar) as an aid in his efforts to move the large stone, thereby materially increasing the leverage power.

ACUTE NEPHRITIS IN THE PNEUMONIA OF CHILDREN.

Dr. Popoff reported four cases recently under his care in which acute nephritis occured in the course of pheumonia. The first patient, a girl of twelve years, had previously had pneumonia at the age of four, but there had then been no trace of of albumin in the urine. She was brought to the hospital suffering from fever, cough and a painful point on the side. Her illness had begun eight days previously with vomiting, delirium and fever, and all the physical signs of pneumonia, which ended in crisis on the ninth or tenth day, with profuse perspiration. The urine was examined upon the day following her entrance to the hospital, and found to be scanty, cloudy, and full of albumin. Microscopical examination showed hyaline and hæmatin casts and leucocytes. These disappeared in a few days, but the urine continued to show a heavy precipitate of albumin. There was no œdema nor symptoms of uræmia. The general condition of the appetite remained excellent. Treatment with methylene-blue was without effect.

The second patient was a boy five years of age, without any previous history of disease. He was brought to the hospital for fever, dyspnœa, and generalized œdema, the latter symptom having appeared on the second day of the disease. All the physical signs of pneumonia, with albumin in the urine, were present. At the end of fifteen days the child left the hospital completely cured. The third case, a girl of six years, with pneumonia, passed urine containing blood-cells and hæmatin casts and 1 per cent. of albumin. She died ten hours after her entrance into the hospital, and the post-mortem examination revealed the presence of pleuro-pneumonia, acute epithelial nephritis, and tumefaction of the spleen. The fourth case was that of a boy twelve years old, with pneumonia and urine rich in albumin. Autopsy showed adhesive pleurisy, double pneumonia, hypertrophy of the spleen, and parenchymatous degeneration of the liver and kidneys.

From these four cases Dr. Popoff concludes that nephritis generally appears on the fourth or fifth day of the pneumonia, the most common symptom being bloody and scanty urine. Anuria or uræmia may supervene, but the casts and hæmatins generally disappear rapidly. The duration of the neperitis may vary from eight to seventy days, though the average duration is from fifteen to thirty days.—*La Médecine Moderne.*

The Effects of Chloroform on the Organism, Especially on the Kidneys.

Allessandra (*Il Policlinic*), draws attention to the fact that in most cases the effects of chloroform on the kidneys are practically *nil.* In patients with renal affections, however, this condition of perfect safety cannot be said to exist, and the author urges very strongly the necessity of carefully observing the urinary secretions for one or two days after the administration of chloroform. When renal lesions are actually in existence chloroform should either be avoided, or at least given with the greatest caution, and prolonged or repeated anesthesias inadmissible.

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SATURDAY, JUNE 8, 1895.

EDITORIAL.

"ACCIPE HOC."

By the time he has abraded old wooden benches and has been burnished by the process sufficiently to convince Alma Mater of his fitness for a binding "in full sheep," the medical student is generally in a condition, mental and physical, to interpret the formal words conferring his diploma as a benediction on himself and on humanity at large. He feels that he has finished an irksome task and henceforth is to enjoy the fruits of his labors. Moreover he has an hieroglyphic which certifies to all men that he is qualified and has received the Doctorate degree in Medicine. This talismanic parchment bears the seal and superscription of the faculty, and surely must bring him fame and fortune. He is now one of the initiated. Didactic lectures have revealed to him the mysteries of disease; clinical demonstrations have discovered how to recognize and treat it; in fact he has seen for himself how easy and simple to the initiate is the whole subject which to the novitiate was a dark and bloody secret. He is stuffed and fairly suffocating with the latest improved scientific medicine. Modesty alone deters him from expressing the confidence he feels that he is amply qualified to fill any vacancy which might occur in the faculty of medicine.

We welcome the new recruit to our professional ranks and cordially extend our best wishes for the realization of his highest ambition. We do not wish to obtrude any advice, nor do we expect any individual graduate to apply to himself what we have to say; but the public have some rights which must be respected even by the infant doctor, and to the medical graduate in general we address a few hints gleaned from experience.

What you do not know about medicine would fill so many books that we doubt that even the world itself could contain them. What you have heard and read during your college education is a huge mass of undigested and indigestible ma-

terial which contains a few elements of intrinsic value. Dogmatic assertions, windfallen theories, professorial predilections, demonstrators' hobbies, quiz-masters' "pointers," clinicians' vagaries, and lecturers' platitudes have been so intimately mixed with some truths that are really of value, and the conglomerate has been so constantly and recklessly hurled at your devoted head, that only bitter experience can teach you how much that has been learned must be unlearned to bring some degree of order and co-ordination out of the uncorrelated fragments of truth which will remain. The first lesson, the one hardest to accept although the easiest to comprehend, and the lesson which must be mastered before experience will undertake to instruct at all, is the apprehension of the fact that you know—nothing. The sooner this fact is fully realized the better are your chances for achieving the greatness of your ambition. Probably no other one thing has limited the possibilities inherent to a vast number of medical practitioners, more than the failure to grasp this same primary truth, or else to learn it soon enough.

When we say you have so much to unlearn we are not reflecting upon the teachers who instructed you, nor upon the writers of the books you may have read. A physician, great as a teacher, greater as a writer in general literature, but greatest as a man who, understanding his fellow men, could give expression to his sympathy; a man whom the world delighted to honor; Dr. Oliver Wendel Holmes, speaking of the existing methods of medical teaching, said:

"The reason why we teach so much that is not practical and in itself useful, is because we find *that* the easiest way of teaching what *is* practical. If we could in any way eliminate all that would help a man to deal successfully with disease and teach it by itself, so that it should be tenaciously rooted in the memory, as easily summoned when wanted, as fertile in suggestion of related facts, as satisfactory to the peremptory demands of the intelligence as if taught in scientific connections, I think it would be our duty so to teach the momentous truths of medicine, and to regard all useless additions as intrusions on the time which should be otherwise occupied. But we cannot successfully eliminate and teach by itself that which is purely practical. The easiest and surest way of acquiring facts is to learn them in groups, in systems, and systematized knowledge is science. You can very often carry two facts fastened together more easily than one by itself, as a housemaid can carry two pails of water with a hoop more easily than one without it. You can remember a man's face made up of many features, better than you can his nose, or his mouth, or his brow. Scores of proverbs show you that you can remember two lines that rhyme better than one without the jingle."

Neither is your task now accomplished so that you may cease from your labor and enjoy the fruits of your work. You have been emancipated, perhaps, from old lectures and from benches which are coëval, but you have not been emancipated from work. On the contrary, experience will be sure to teach you that what you have thus far regarded as work is in truth recreation compared to the ceaseless toil and unremitting care and labor inevitable to the practice of medicine. You are not leaving school to work as a craftsman in some trade, nor to take part in the traffic of commerce, nor to supervise machinery in shops, but to practical work in the art of all science, most difficult and responsible for its every day application deals with the interests and lives of human beings. You will be subjected to and harassed by the physical strains incident to incomplete knowledge and incapacity to deal with the material side of your profession. In spite of the

utmost and sincerest efforts and the most incessant study of your profession, the realization of your ignorance will grow with your experience. And your soul will be made sick by the revelations of human weakness and iniquity you must receive and bury in silence, and will be wearied by the burdens of responsibility which will be thrust upon you, and which you must bear without comfort from any human source, for you may not violate any confidence reposed in you—the physician.

Truly your labor has just begun. You must sort and re-sort and pick over again from the chips and junk you have accumulated, and therewith build and build better than has yet been done. You will have to secure new materials also. Very much of the old literature of medicine, very many of the dogmas of the old authorities must die out of the memory of the profession—in fact should never have had a place in it.

To become great in the medical profession requires the exercise of the highest intellectual powers, analytical and synthetical; the staunchest moral principles and courage, and indefatigable labor.

Whether or not the words, "Accipe Hoc," introduces to yourself and the world a new blessing or another disaster, will depend entirely upon a factor hitherto ignored, henceforth of the greatest importance—the personal equation.

ABSTRACTS.

ADMINISTRATION OF NITROUS OXIDE PRELIMINARY TO ETHER ANÆSTHESIA.

M. H. Rogers, Physician and Pathologist to the Bristol England Hospital for Sick Children and Women, writes (*Bristol Med-chir. Jour.*)

As long ago as 1876, Clover described how before ether anæsthesia it was advisable to administer nitrous oxide; so that were it not for the neglect of this valuable suggestion, I should feel that an apology was required for bringing up such a hackneyed question. All the unpleasant sensations experienced during the early stages of ether anæsthesia may be avoided by giving a small quantity of nitrous oxide first.

First of all, I wish to express my regret that chloroform is still so largely used, when we have a far safer and an equally satisfactory anesthetic in ether. As far as I can judge, the causes for its almost universal use—certainly in country practice—are, that its administration requires no expensive, more or less complicated apparatus, and that its use is far more economical. But when we bear in mind the not inconsiderable risk attendant on all cases of chlorform anesthesia, I am convinced that its use should be restricted to those cases in which ether for some particular reason, is to be discarded. There must be, in all cases of anesthesia sufficiently profound for surgical operations, a certain amount of risk; but we may always feel when administering ether that when once sufficiently deep narcosis has been produced, timely warning will be given of any dangerous condition; whereas with chloroform, patients not infrequently pass to a more or less dangerous stage with great and unexpected suddenness. Whether or not we hold, with the Hyderabad Commission, that cardiac failure in chloroform anesthesia is only secondary to respiratory failure matters little in comparing the relative safety of ether and chloroform, for there appears to be no serious risk of either when ether is given.

Without wishing to raise the whole question of the choice of anesthetics, the best methods of administering them, and their relative safety or danger, I must say I believe that a large number of the fatalities from anesthetics are due to inexperience, or perhaps primary want of knowledge, on the part of the anesthetist; or want of attention during the operation to the patient's condition. Experience should be gained during the time of student life, and should not, as is the usual custom,

be postponed till the qualifications to practice are obtained. Plenty of opportunities are given at the hospitals attached to medical schools for students to learn how to give anesthetics, but they are much too often neglected for the superior attractions of the operation. Theoretical knowledge of administration, though not so useful, is of no mean value; but few of our medical schools include a course of instruction in anesthetics in their syllabus, and I have never heard of a question on the subject being asked in any examination. The anesthetist should be wholly engaged in giving the anesthetic, and should pay no more attention to the operation and doings of the surgeon than to see that his patient is sufficiently under to render the operation possible without movement or pain.

Now to the point to which I wish specially to call attention. Those who have had the misfortune to have taken ether will know that the inhalation of the vapour is not altogether pleasing. The odor is pungent, and the taste burning and most unpleasant; and it is impossible, even when given by the most skilled hands, to avoid these disagreeable sensations. When, however, nitrous oxide is given in the manner I shall presently mention, all this unpleasantness is lost; further, there is neither struggling nor cough; in fact, the patient passes from the far from unpleasant sensations of nitrous oxide anesthesia to ether narcosis quite insensibly and quietly. I have had nitrous oxide administered to me more than once, and can assure those who have never experienced it that, beyond a peculiar sweet taste and a tendency to take deeper respirations than usual, the sensation is on the whole pleasurable. In administering gas before ether, only sufficient of the former anesthetic is given to render the patient partially insensible—only till the sensation of lightness of the head is induced; and though I am not prepared to say that any anesthesia of the air passages is produced, practical experience teaches that after a few—six or eight—respirations the irritating effect of the ether on the mucous membrane of the respiratory tract is not observed. On the last occasion on which I took nitrous oxide I attempted to count the number of respirations I took before I became insensible, and on recovery found I only remembered taking twelve. No doubt I should have felt the pain of the tooth extraction if it had taken place then; but this shows how soon loss of consciousness comes on.

The apparatus I use is Hewitt's modification of Clover's ether inhaler: others are in use, but I find this answers its purpose well, and I shall continue to use it till one evidently superior is introduced. The gas-bag, previously filled with nitrous oxide, is fitted on to the dome which has been warmed and supplied with ether. All the fittings of the apparatus should be so accurately made that there is no leakage of gas or ether; so that when the gas is turned on no taste of ether vapor is noticed. The valves are so arranged that respiration of air alone is allowed at first, by which the patient gets accustomed to the face-piece and can be induced to breathe properly—a thing often not done at first—and the anesthetist can hear that the valves are working properly. After a few respirations the gas is turned on, and is drawn from the bag to the patient's lungs and expired through the valves. About six respirations in this way are permitted, when the valve arrangement is turned off, so that respirations now pass from and to the bag, and at the same time a small turn is given to the ether dome. In a short time signs of slight nitrous oxide narcosis are noticed, but should not be allowed to proceed too far. There should not be much lividity, but should it become marked, a single breath of air causes it to disappear. Meanwhile the ether has been turned on till now it is nearly at full, and in a short time the patient is ready. The great difficulty to avoid is, allowing the patient to come round between the gas and ether narcosis—a thing very easily done if too much air is admitted. Only experience can teach the anesthetist how much, and when air should be given. Deep nitrous oxide anesthesia is not desired or required. It will be found that two gallons of gas is about the amount required; but each patient has a personal equation both for nitrous oxide and for ether, and the anesthetist has to find it out by careful and cautious observation. I believe by this method of administration after-vomiting is less frequent. But much, too, depends on keeping the patient equably under the anesthetic at the time of the operation. There should be deep anes-

thesia at first, especially if the operation is on a sensitive part, but much lighter anesthesia is sufficient subsequently; but it must be maintained equably, or as equably as is possible.

To those who have no experience of this method, I can confidently recommend it as by far the simplest, both for the patient and the administrator; and if comfort is concerned, I can unhesitatingly say that it is the best yet devised.

SOCIETY REPORTS.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA. ABSTRACTS OF SOME PAPERS READ.

PRESENT STATUS OF THE SANITARY MOVEMENT FOR THE ADOPTION OF THE INDIVIDUAL COMMUNION CUP.

Dr. H. S. Anders, Philadelphia.

Attention is directed to the established facts and principles of hygiene which underlie the sanitary argument in favor of the abolition of the common and the substitution of the individual communion cup. Ministers and Biblical scholars of broad and progressive views are rapidly recognizing the disease dangers of the ordinary cup as passed to communicants in turn, among any one of whom incipient or hidden communicable disease may contaminate the mouth secretion and thus be passed to many who are innocent and in good health to jeopardize them. The individual communion cup is presented as the only sanitary, reliable, practicable and practical solution of this problem of danger to the public health in a Christian community. There are no valid scriptural, historical or ecclesiastical objections to the change, according to the majority of protestant denominational authorities.

The individual communion cup has been in use with perfect satisfaction and success, sanitary and reverential, for one year, since its use first by the North Baptist Church of Rochester, New York. Twenty churches, including some of the Methodist Episcopal and Presbyterian denominations, in that city have adopted, or voted for the innovation. The congregations number from 500 to 2,000 communicants.

The distribution of communion wine by individual cups is rendered more expeditious and harmonious, and is no less spiritually impressive.

Four churches in Philadelphia have made the change, the Fourth Baptist, the Bethlehem Presbyterian, the Eighteenth Street Methodist Episcopal and the Heidelberg Reformed. The movement is receiving favorable and intelligent, calm and general consideration in numerous churches throughout the land. New York, Pennsylvania, New Hampshire, Massachusetts, Georgia, Virginia, Ohio, Illinois, Missouri, California, have all to my knowledge received the good seeds of the sanitary reform in proper spirit, and the fruitage is becoming evident in large measure.

ADDRESS IN HYGIENE.

Hildegarde H. Longsdorf, M. D., of Carlisle.

The science of hygiene is under a great onward impulse through the discoveries and researches in bacteriology. The theories based upon these researches have seemed to make the health problem an easy one to solve, but in spite of these tangible results the retrospect and outlook are not re-assuring.

Many questions on sanitary lines remain unsettled; there is a growing fear that the race product is on a lower average than formerly, and that the vigor and manhood which constitute the real wealth of the nation is declining.

The causes for this must be looked for in the increase of the "dissolute and effective" classes, and the want of restraint upon their disease-developing power.

Hygiene in its ultimate meaning is *race development*, and from this standpoint it must be considered among the many

humanitarian and sociological questions that perplex the thinker and threaten the integrity of the body politic.

If prevention is the keynote of the medical thought of the day, it is the height of wisdom to pay heed to the sources of moral contamination. Overcrowding in cities, child-labor, unnatural and unremitting toil by the mothers, are some of the most potential of these causes, and they appeal to the hygienist and to the legislator on the basis of race deterioration and loss to the State.

The absolutely dissolute should be isolated and their labor made productive; first, to prevent the transmission of their pernicious qualities; secondly, to relieve the State of the burden of their maintenance in asylums and reformatories.

MENTAL INFLUENCE IN THE TREATMENT OF DISEASE.

Theodore Diller, M.D., of Pittsburg.

The paper was a plea for the study of mental influences which detrimentally or beneficially influence persons. Attention was called to the fact that little or no effort was taken to protect the public from organized movements like faith-healing, christian science, etc., which exert baneful psychical influence over large numbers.

Physicians can do much to correct evils arising from the influences of christian science, etc., by studying and recognizing the kernel of truth contained in each, using it, and showing, when necessity arises, the evil which proceeds from the ignorant and unauthorized use.

The quack and charletan effect many of their so-called "cures" by first creating or greatly magnifying in the minds of their victims the disease they essay to cure.

In each individual case of any kind, it should be the effort of the physician to remove all baneful mental influences which may surround the patient and create about him a healthful mental atmosphere. Intelligent and kindly consideration, with confident suggestions within careful limits, can generally do all that hypnotic sleep can do, and without the suspicion and mysticism which attaches to the latter.

Above all it is essential to him who uses these mental influences for therapeutic purposes, to be honorable and to possess in himself a character from which shall radiate healthful mental suggestions.

NECESSITY FOR THE ADVERTISEMENT AND ISOLATION OF CERTAIN CONTAGIOUS AND INFECTIOUS DISEASES.

F. LeMoyne, M. D., of Pittsburg.

The object of this paper was to call attention to the importance of advertising and isolating cases of contagious and infectious diseases, particularly of scarlatina and diphtheria. Such affections are conspicuous causes of suffering and mortality, and by proper precautions they are to a great extent preventable.

Existing laws in this State commit the strange inconsistency of exacting precautions and enforcing restrictions in regard to small-pox, which is to a great extent under control by vaccination, while scarlatina and diphtheria, to which a much larger proportion of the population are susceptible, have every opportunity for dissemination and are not subject to proper legal regulations.

The members of the medical profession are the natural and acknowledged guardians of the health of the people and it is incumbent upon them to lead the public mind safely in that direction by emphasizing the fact that every case of scarlatina or diphtheria not carefully isolated and plainly placarded is a shameful menace to the surrounding population.

REPORT OF A SERIES OF CASES OF LARYNGEAL DIPHTHERIA TREATED BY ANTITOXIN, WITH AND WITHOUT INTUBATION.

Edwin Rosenthal, M.D., of Philadelphia.

After brief mention of the historical discoveries in bacteriology leading to the latest method of treatment, he gave a summary of his work. He divided the cases into two groups; one upon whom the operation of intubation was performed, and the other where the operation was not a necessity.

Those cases, ten in number, treated without intubation recovered.

Of those cases, twelve in number, treated with intubation, two died and ten re-

covered; a mortality of sixteen per cent. Combined statistics, before the advent of antitoxin, in cases treated by intubation showed a mortality of seventy-two per cent.—that is twenty-eight recoveries in a hundred. Dr. Rosenthal's own statistics, in a former paper, showed a mortality of sixty-two per cent.—38 recoveries in a hundred. In juxtaposition to this the combined statistics of antitoxin treatment have shown a marvelous reduction in the death rates.

Dr. Rosenthal's work was done mostly with Behring's antitoxin, though he has used Aronson's, Gibier's and McFarland's antitoxin. Almost all his cases recovering, makes their value equal; the German antitoxin, however, brought quicker reaction than the domestic, and for that reason was superior.

Dr. Rosenthal's conclusions are:—Antitoxin is a specific in diphtheria. In early cases, those seen in one or two days after injection, no death rate should be recorded.

In laryngeal diphtheria, the so-called membranous croup, antitoxin is especially indicated. It should be used in every stage or at any date of the disease no matter how late we see the case; its influence can be proven, for cases of laryngeal diphtheria perish from suffocation long before any toxic symptoms could be manifested; for that reason he strongly urges the necessity of prompt intubation when indicated, even if before the injection of the antitoxin. Regarding the use of antitoxin:—Do not delay or hesitate in this disease because the case is not so bad, or because it might get well without it; but use it at once—the earlier its use the more certain its success.

RATIONAL TREATMENT OF FRACTURE OF THE FEMUR NEAR THE HIP-JOINT IN AGED PERSONS

E. V. Swing, M.D., Coatesville, Pa.

The paper recites briefly the history of eighteen cases of what is commonly called "intra-capsular" fracture of femur, and advocates, in all cases of fracture near the hip-joint, in aged persons (seventy and upwards), rest in bed on a good mattress without extension or counter-extension, as giving the best promise of *life* and the most *comfort* while living.

A CLINICAL CONTRIBUTION TO THE STUDY OF THE RELATION OF CONVERGENCE TO ACCOMMODATION.

Howard F. Hansell, M.D., of Philadelphia.

Read by title.

Report of a case of divergent strabismus of many years standing in which binocular fixation was possible only at the expense of clearness of distant vision. Each eye was nearly emmetropic and had no organic defect, and either could be used in fixation. There was no assignable cause for the anomaly.

The interest in the case lies in the transient power of binocular fixation accomplished only by conscious effort and with the simultaneous contraction of the ciliary muscle by which myopia of 3.5 D. was invariably acquired to disappear immediately when the divergence of the optic axes was restored. The association of the function of accommodation with that of convergence where the primary stimulus is directed to the interni instead of to the ciliary muscle, is thus demonstrated, just as reversely normal contraction of the accommodation induces normal convergence, and pathological contraction pathological convergence; instances of which are exceedingly common and indisputable.

RECENT EXPERIENCE IN THE ELECTRICAL TREATMENT OF FIBROID TUMORS AND CATARRHAL AFFECTIONS OF THE UTERINE TRACT.

G. Betton Massey, M.D., of Philadelphia.

In the treatment of two classes of fibroid tumors there is no conflict between the claims of electricity and the knife. There are cases in which electricity in expert hands can give a hundred per cent. of practical cures; not necessarily cosmetic cures, but completely satisfactory in the comfort and well-being of the patient. There are also cases in which electricity can only do harm, and in which ablative surgery is not only wise but imperative.

In a third class true conflict occurs, and I may specify this class as made up of large tumors causing much deformity, and which by reason of their situation or constitution require prolonged efforts for electrical absorption. If the deformity is great it becomes a question for the patient

to decide whether the dangers of an operation should not be faced. Operations are too frequently performed on small tumors in which a complete and permanent cure can be assured from the electrical treatment. Hemorrhagic tumors of all sizes should be placed under this treatment; the author claims never to have had a failure in curing the hemorrhage and pain and in reducing the size. Of non-hemorrhagic large tumors reduction or disappearance is most certain in instances of symmetrically developed interstitial growths.

The class in which electricity is not indicated embraces degenerating tumors in which malignancy may be suspected, and all tumors associated with purulent inflammations of the appendages.

One of the most important services of electro-therapeutics to gynecology is the prevention and cure of tubo-ovarian disease. This affection is dependent upon a uterine catarrh; hence the cure of an endometritis is in many cases the prevention of the former. The positive pole is indicated within the uterus and the negative pole within the vagina at different applications. A large number of young girls have thus been restored to full womanly health, in spite of the fact that some of them had been advised to submit to an unsexing operation.

THE TENNESSEE STATE MEDICAL SOCIETY.

April, 1895.

Dr. J. H. Warmuth, M.D., Smyrna, read a paper entitled

DIFFERENTIAL DIAGNOSIS BETWEEN ROSEOLA, MEASLES, ROTHELN AND SCARLET FEVER.

(See page 803.)

J. S. Nowlin, M.D., Shelbyville, read a paper entitled

DIFFERENTIAL DIAGNOSIS IN THE ERUPTIVE FEVERS, AND SOME THOUGHTS ON ENDEMIC AND EPIDEMIC INFLUENCE.

(See page 806.)

DISCUSSION.

DR. N. G. TUCKER, Nashville: In these exanthematous affections we should exercise great care in making a diagnosis. My experience in the last three years, as Health Officer of Nashville, has led me to believe our physicians are exceedingly careless in this respect. No doubt there is great similarity in these affections, but they have a natural history, which, if properly studied and properly understood, and if we took the care we should take in making a diagnosis, would prevent so many mistakes in diagnosis and treatment. I may mention a case in point. Only a few years ago, a case of small-pox occurred in Hot Springs, Arkansas. A diagnosis was not made until the patient was dead, transported across the country, and other cases developed from it. I believe it is claimed about 175 cases have occurred in Hot Springs, and there are probably twenty-five or thirty localities in this country of ours affected by the disease. It has come into our own State. Several cases have occurred in Covington. If proper care had been used in the first case, it might have been controlled at once. No doubt some of these cases have been pronounced rötheln or German measles. It is true that we have not been entirely clear of it here in ten years. I don't know how many years before that since there was a time when the city was free from it. It has not prevailed the entire year, but sometime during the year a case would pop up. A case called rötheln, chicken pox, or something of that kind, would prove to be a case of scarlet fever. And I will say to the profession and to the people of Nashville, so long as this is true the disease will simply have to wear itself out; it will continue from day to day for the Lord knows how long. Physicians should study these infections. They have their periods of incubation and their periods of eruption; everything is as marked as a crop of corn or of oats, and if you give

more attention, there will be less trouble in the care of these cases.

DR. J. M. COYLE, Nashville: How would you make your diagnosis of scarlte fever in the negro before desquamation?

DR. TUCKER: The eruption will occur in twenty-four hours from the beginning of the attack; in measles, seventy-two hours; and in small-pox seventy-two hours. Among the negroes, where it rarely occurs, the rash appears in twenty-four hours.

DR. COYLE: In the negro the eruption often cannot be discovered. They are not white; they are black, yellow; they are all colors. In the black race scarlet fever may occur and the eruption not be discovered because it may not show itself plain enough for us to see it. We may guess at it but I don't see how we can arrive at a positive diagnosis. And it is from this source the great number of cases are carried to Nashville. I have investigated a number of cases of scarlet fever in the negro, and until desquamation occurs there is little ability to diagnose it.

DR. J. B. NEIL, Nashville: Did you ever see a case of scarlet fever without sore throat?

DR. COYLE: No, but I have seen many other conditions with sore throat.

DR. W. F. GLENN, Nashville: A thought as to how cases become epidemic. Take what the doctors themselves do. We have our office hour, and before the office time we go out, wearing perhaps a woolly overcoat, to see one patient where there may be scarlet fever, and, without even washing our hands, from there we go to another place to treat children, and thus make a number of calls before returning to our office. Let the gentlemen who treat scarlet fever, attend scarlet fever cases only; where the patients can pay the charge, let them pay it, and where they cannot let the city pay the expenses. I am sure I have carried scarlet fever, and I am sure other physicians in this city have carried scarlet fever, to their sorrow.

DR. W. A. H. COOP, Nashville: The diagnosis of scarlet fever in the early stages is not always possible. For instance, a woman attended the birth of a child in a neighborhood apart from where I was then practicing, and returning home she developed a violent sore throat. I considered it only a very bad case of tonsillitis. I made no effort at isolation. What was the consequence? The entire family became affected; the disease lasted from midwinter to July or August, and many infants died from it.

DR. J. B. COWAN, Tullahoma: The question of scarlet fever is especially interesting. Probably, of all the exanthemata, we have no disease so contagious as scarlet fever; and no other disease where the contagion will remain in the room so long. It has been said you have had scarlet fever in Nashville for ten years. Have your rooms been thoroughly disinfected? And have you observed the rules for stamping out that poison in your rooms? What method have you used in doing it? I have known scarlet fever to occur when there was not another case in the city, in a room where there had been scarlet fever seven years before. That room had been repainted and repapered. I have known it, in other cases, to occur after two or three years. I have known erysipelas to occur after two years.

Nashville is not the cleanest place in the world by a good deal. I doubt if you have accomplished much in this respect, and so I think you have the germs here now. Somebody said something about the ignorance of the people in the country letting it come to the city. Why, we have never had an epidemic, and we have had only five invasions in the town I came from, and these came from Nashville; were sent there by the doctors. Every single case was sent from the city of Nashville. Ignorance does not allow it to come only from the country into Nashville, you see. When we undertake to stamp out scarlet fever, we usually accomplish a good deal by the patient dying and being put in the ground; but then we should go to the house and burn everything we can—I don't know whether boiling will do or not. (Question: Burn the house?) I suppose that would be a good idea.

As to the different diagnosis. I believe you can differentiate between measles and scarlet fever, and small-pox and scarlet fever. But I wish to say that I have never seen an epidemic of diphtheria or of scarlet fever but I have found cases which I do not believe anybody, even with a microscope, could differentiate. I have seen cases in the same family which I could not, and I do not believe any man could, differentiate.

DR. HOLSTROM: In 1888 I moved into a house, and fifteen days thereafter my children were taken down with scarlet fever. I had moved to the country. I had not been anywhere, and they had not been anywhere to come in contact with it. My first case was an attack of scarlet fever sore throat. The next, a little girl, had quite a high temperature and then an eruption. About three years previous a child had died in the same house of what was called membranous croup. In the last year, 1894, there were six cases of scarlet fever in the same house. These occurred after a family had come in and repapered and fixed the house. I believe it would be necessary to burn everything and destroy the house. We have had scarlet fever here for seven years. One family moved out of this house and another moved in, and I do not believe we have disinfected it. After a case of scarlet fever is over, the doctor leaves the card up, and an officer goes to the room and disinfects it. I am satisfied the case that occurred in the house I referred to, which was reported to be membranous croup, was scarlet fever. As Dr. Tucker, who, of course, was called in, will know, the first two cases appeared to be diphtheria, but four of the children had scarlatina. We put up a diphtheria card. I believe the germs were there for six years.

DR. BRADLEY: I would like Dr. Glenn to explain the position he takes regarding physicians scattering this disease. I am satisfied we all do that. I am satisfied I did, and then I know I lied like a puppy to my patrons when I said I had not and that it was conveyed through the air. But Dr. Glenn, I believe, takes the position that there should be two or three physicians in every city to attend to these cases of contagious disease. I would like Dr. Glenn to explain to us how we may know whether we have a case of scarlet fever if we do not make at least one call. Suppose he has a dozen cases to see to-morrow in the city. He calls and sees one, and turns it over to another doctor, and then goes on to see his other eleven cases. The next day he will probably find another case to turn over to the other doctor. In the country there is only one physician within five or six miles, and you will get a "right nice cussing" if you call a neighboring physician to treat a case of scarlet fever. I am opposed to scattering the disease. I have not half enough clothes to change every time I see a case, but I, for one, will wear a different suit while treating these cases.

DR. G. A. BAXTOR, Chattanooga: I dislike to hear or to feel that we have no power over these epidemic forms of disease. For one, I am thoroughly convinced of our power of choking them out of existence, provided we can once know them sufficiently to get our fingers on their throats. It is the letting up too soon; it is the failure to watch the patient until desquamation is complete; the failure to personally disinfect the patient after desquamation is complete; not the two or three days before a certain diagnosis can be made that permits the spread of these diseases. Oftentimes it is due to letting the patient out of the room with the clothing on, and then disinfecting the room when the ram has jumped the fence and the flock has followed and you cannot stop them. We have to control them from the first, and throughout, and constantly, and not leave it to the Health Officer or anybody else. That part of the work belongs to us as much as treating the child for the safety of the child's life.

I know scarlet fever cannot always be diagnosticated. Certainly there are many cases which cannot be diagnosticated at all at first, but none of us see a case of sore throat, especially during an epidemic, without scarlet fever occurring to our mind, and diphtheria and tonsillitis, and three or four of those things, and we are on our guard until our diagnosis is absolutely complete.

The idea to me is a repugnant one, that infection cannot be destroyed in a house. I know to the contrary. Boiling, at 212° F. will kill any germ in the world, if the boiling is continued long enough. Again, we have germicides that need not be mentioned. If you properly close the room and properly sulphur it, you have absolute safety. I would as soon take my children into a room a week after a case of scarlet fever, if I can go over the room, as I would after any other septic trouble. Boiling for half an hour will kill any germ. If you wash the paint and walls, if necessary, with corrosive sublimate, and sulphur it properly while the walls are damp, you will render it safe. But if you do not do that, infection may remain, not only one year but a dozen.

DR. ROBERTS: There are two features in connection with scarlet fever that to a certain extent cause both practitioners and people to be somewhat negligent. So many cases occur that are very mild; and people are loathe to take heroic preventive measures. As to the measures spoken of by Dr. Cowan, the objection is, that so often we see one case in a family with three, half a dozen, or more children all housed up together for twenty or twenty-five days, and not another case develops. How often does that occur! At least half a dozen times in my experience during the last winter. In a family of six, ranging from an infant at the breast to children thirteen or fourteen years of age, a typical case of scarlet fever occurred. The house was quarantined, and the family kept in the same room, even on the same bed; the case passed through all the stages; and yet not a single other case has occurred there, although that was in 1894. You cannot get the people to take heroic measures in these cases. Isolation is very different from thoroughly stamping out the infection. It will modify it and lessen it to some extent.

The vitality of the germ varies remarkably. Besides, it is so portable. In my country practice, I have seen an isolated case occurring with no other case for miles around. One case occurred in a newly built house, with no other case I knew of within ten miles, and the child had not been off the place for a long time. Some other member of the household must have brought it there. In the adjoining county of Sumner, I was called to see a family living in a new house. After some eight months' residence in the house, one of the children, some seventeen or eighteen years of age, contracted the disease. She was before apparently in good health and had not been off the place for a long time. I noticed a pair of shoes in the family, which were evidently new. I found they had obtained them from a certain store. I happened to have been in that store a short time before and asked the keeper how he was, and he replied, all very well except one child had scarlet fever. The result, I think, was the development of a case in a place at quite a distance.

DR. KELLY: I think the remarks concerning the stamping out of scarlet fever will scarcely be very generally accepted. Still, that none may be confused with the idea that the germs of any of these diseases may be destroyed by fifteen or twenty minutes or half an hour or two hours' boiling, it is only necessary to refer to the experiments, which show the germs may be destroyed, but the spores will not be destroyed. This experiment can be tried by any of you at the office, and you will find after a few days the germs present again. Boiling does not destroy the spores, but does destroy the vital germs. The curious fact that some people can occupy a bed where a scarlet fever patient has died and will not contract the infection, is often a stumbling block to the stamping out of the disease. The people become careless. Why physicians do not carry the disease oftener than they do we cannot explain. The fact that it is transferred from one place to another is in favor of nothing, but the specific germ is heavy, and tends to sink on the carpet and clothing; the physician carries it only on the lower part of his clothing, gets into his buggy, and it gets in the rug and is carried about in that way. In my opinion, a bath and scrub and shave are altogether unnecessary, especially if the clothing, and particularly that of the lower part of the body, be changed.

DR. J. B. MURFREE: In my experience the contagiousness of scarlet fever is not greater than that of other infectious diseases. It is a fact that the area of infection is limited to within a few feet of the patient. It is less portable than the contagion of any other disease. It is susceptible of being destroyed by fumigation and disinfection. One case comes to my mind at this time. It was a well marked case of scarlet fever in a family of six young children, and a family where other children were coming and going. After the child recovered the room was disinfected, and there has not been a case of scarlet fever among the other children nor in the neighborhood. Another case. In the country a number of children were gathered together in a small room. The disease had been brought to the home, and a little child died in forty-eight hours, yet in that family there were three other chiidren in the same room that the little girl died in, and not one had the disease. It is a question whether or not it is atmospheric borne. I have seen cases of scarlet fever, time and again, where I

could not trace it; and I have seen cases, with other children in the room, without the disease affecting these other children. The idea of scarlet fever remaining in the room ten years and then causing the disease is incredible. Why not consider it as a fresh infection? Surely the poison is not so virulent as the gentlemen would have it.

DR. T. H. MARABLE, Clarksville: I was impressed with Dr. Glenn's idea of conveying scarlet fever. I had never thought of it in that way. I have heard Professor Loomis, in lecturing upon scarlet fever, say that he carried his own child with him, had no hesitancy in going to see a case, coming out and getting in the vehicle with the child. I don't believe that I, nor any other physician, ever carried the contagion in the clothing. We had a marked epidemic of scarlet fever, according to the statement of the health officer, and it devolved upon me, while the health officer was away recuperating, to look after the epidemic. I found the most effectual means of spreading the disease was through the physician: not, however, by carrying the disease in his clothes, but by letting the people intermingle before the desquamation had passed off. I remember one case in which there was a very violent sore throat with only a small patch of eruption on he back of the hand. It was one of the first cases I saw at that time, and I didn't know it was scarlet fever until desquamation occurred, and the hands and the soles of the feet desquamated almost solidly. There was a very fine desquamation of the entire skin, but on the soles of the feet and the hands, desquamation was almost perfect. In that epidemic we had some cases with so very little sore throat that your attention would not be attracted to it. They were not kept in bed, and in a few days desquamation set in and they went through the regular course. I have seen cases there where the temperature did not go above 101°, 102° or 103°.

DR. J. S. NOWLIN, (Closing the discussion): The discussion was rather confined to scarlet fever. My paper was merely on the eruptive fevers, with remarks on epidemic and endemic influence. It seems to be a question whether it is an easy matter to make a differential diagnosis between scarlet fever and diphtheria, without the aid of the microscope. Of course, general practitioners must be governed very largely by clinical features. The paper I read I thought set forth pretty clearly the distinctive symptoms between the two. You will notice, in scarlet fever, the fever runs up rapidly, becoming high quickly. As was said by Dr. Tucker, it is these symptoms which must be kept constantly in the diagnostic eye of the medical man. In scarlet fever the fever runs up rapidly. This is not true with the initiatory symptoms in diphtheria. Whether or not you find an eruption or ulceration upon the skin in scarlatina, you will always find a scarlet blush in the throat. I don't believe I have ever seen a case of scarlet fever in which I could not discover this. You can see the evidence of it in the throat, on the fauces and on the cheek. Diphtheria presents itself as a disease of the tonsils, sometimes involving the uvula and the surrounding tissue; but this symptom involves the whole surface visible when you open the mouth, although not marked in some instances. How often we hear it said that the strawberry tongue is peculiar to scarlet fever. As I understand it, in a strawberry tongue there is a white coat, through which the red papilla are seen protruding. As an almost universal rule it is a black coat. In diphtheria I never saw a white coated tongue.

DR. O. C. OMOHUNDRO, Nashville: This is the first subject before this Society at any time where there has not been a word said about treatment. The idea seemed to be to disinfect the room and give attention to the inmates of the house, but not the treatment of the patient. As to disinfection, I think that rooms can be thoroughly disinfected by using two ounces of sulphur to each hundred cubic feet in the room. One mistake with many gentlemen is that when they go into a sick room they remove all unnecessary objects and the whole paraphernalia of the room, which is already infected, and then, after the patient is convalescent, they disinfect the room. Now, I would suggest that we should move everything out of the room, not forgetting books because numerous instances of books having propagated the disease have been reported, and disinfect them thoroughly at the very first visit we make to the room. Then take charge of the patient, and let the treatment be on

general principles. For six weeks afterwards the patient should be confined to the room because we knew the infecting material is given off by the patient for six weeks. I think it should be taught that patients, before they go out, should be thoroughly washed with the carbolized oil. There should be a disinfecting fluid in the room, in which the physician can wash his hands. The disease is propagated by close proximity. I would especially impress you with the importance of treating the inmates of the house as suspects. Isolate the one infected, from the children in the house but treat the latter with disinfectant washes or gargles for the mouth, and, if any be in poor health, with constitutional treatment. We must attribute to the condition of the patient the difference in the disease in different families. If we use disinfectants in the throat, it will render the poison less noxious. With this treatment, I have had very little of serious throat complications.

DR. TUCKER: There is an idea prevalent among the people, that there is a difference between scarlatina and scarlet fever, and as a consequence cases of scarlatina are regarded as trivial, of little danger, although it can, we know, cause scarlet fever in the most malignant form. If we could impress the people that these names are synonymous, it would help us much in caring for this condition.

MANAGEMENT OF TYPHOID FEVER.

Professor F. C. Shattuck of Boston, has for the past two years given to typhoid patients, who seem able to bear them, raw and very soft boiled eggs, custards, animal broths, strained gruels, ice-cream, junket, blanc-mange, and even scraped or very finely minced meat, in addition to their milk, watching the stools, of course, for the apearance of undigested food. He believes in giving as much and as wide a range of food as each individual patient can digest, and as will not prove irritating to the ulcerated intestine, with plenty of water internally to promote the elimination of soluble poisons. He does not regard with much favor the use of the so-called intestinal antiseptics, and prefers small doses of the salicylate or subgallate of bismuth, the astringent properties of these compounds being naturally taken into account in their administration. He often gives a preliminary dose of calomel, especially in cases seen early and without pronounced diarrhœa. He resorts to enemata of water every second day when there is constipation, and to morphia to mild narcotism where there is intestinal hemorrhage. He does not approve of controlling the fever by means of drugs, and only now and then gives an occasional antipyretic dose in cases in which the headache or pyrexia produces such discomfort as to warrant it. Phenacetin he believes to be the safest of these remedies.

He has used the Brand method in hospital practice, and of 236 cases treated expectantly and with cold spongings 23 died—a mortality of 10 per cent. For some years past the cold spongings have been made much more efficient in the Massachusetts Hospital by rolling up the rubber sheet placed immediately under the patient at the sides so as to form a trough. Water at 60° F. (15.6° C.) is used, sometimes water with a little ice in it to make up for the heat absorbed from the body. One attendant can use cold water in this way, while two are almost indispensible for the tub-bath, with affusion to the head and friction to the body. A temperature of 102.5° F. (39.2°C.) is regarded as an indication for cold water.—*Boston Medical and Surgical Journal.*

Prescriptions for Asthma.

Chloroform	dr. i
Æther	dr. iss
Syrup acaciæ	dr. i
Tr. cardamom Co.	dr. i

M. Sig. A teaspoonful every half hour until relief is obtained.

Ammo. iodidi	dr. ij
Ext grindelia rob. fl. d.	ss
Tr. lobeliae, " belladonnae	āā dr. i
Syrup pruni virg.	dr. i
Aq. dist.	

M. Sig. Teaspoonful three times a day.

—*Med Review.*

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE AMERICAN JOURNAL OF OBSTETRICS.

Dr. Bache Emmet writes of

Injured Ureters in Abdominal Surgery.

The author had recently to deal with a ureter injured in the removal of a tumor and occasionally in the removal of a calculus it is necessary to open the ureter, usually by a longitudinal incision. When high in the ureter it is better to try to press it upward into the pelvis and extract through a lumbar incision or, if below the pelvic brim to push it into the bladder and remove it through that organ. When distant from these ends a stone may be safely removed by peritoneal incision. The following cases reported by other men are used as illustrations.

A boy eight years of age, suffered from hæmaturia with abdominal pain for sixteen months. Failing to make a satisfactory diagnosis an exploratory incision was made in the left linea semilunaris and a calculus found in the right ureter two inches from the bladder. The wound was closed and healed. Three weeks later an incision as for ligature of the common iliac artery was made and the stone extracted with forceps through a longitudinal incision. The ureter was stitched with fine silk; a drainage tube introduced to the bottom of the wound and the boy made a perfect recovery. Contrary to the opinion of others, the author thinks a stone may be safely removed by trans-peritoneal incision and the ureteral edges united by continuous suture and the peritoneum sutured over it, or a through and through ureteral incision may be made after the abdomen has been opened for any reason. This method has been twice reported. In one case the patient recovered; in the other the suturing was successful but the patient died of peritonitis. This illustrated a prominent obstacle to the use of this method. There is rarely an obstructed ureter without an infected kidney, and this is apt to infect the wound and cause peritonitis. The second case, reported by Fenger, is plainly extra peritoneal—not trans-peritoneal.

When the trans-peritoneal method is used we should use chromicized gut or fine silk continuous or else Glover's stitch suture and then stitch the peritoneum over all, if necessary insuring coaptation by careful trimming of the ureteral edges.

Should a partial transverse incision be accidentally made during an operation a very slight cut may be closed by a stitch or two and covered by peritoneum, but if gaping much the transverse must be changed into a longitudinal cut, to prevent a stricture. To accomplish this two methods are employed: The cut may be doubled on itself and stitched or the ureter may be completely severed and an anastomosis formed, or the proximal end may be implanted in the bladder. Two centimeters of ureter has been excised for stricture near the kidney and the end successfully implanted in the pelvis. Implanting the proximal end in the abdominal wound, the loin, rectum or intestine has usually been very unsatisfactory. Some operators favor implanting the proximal end in the bladder, but the author opposes this on various grounds, particularly if there has been much shortening, and thinks that obliteration by ligature might be preferable. Cushing succeeded by direct suture in one case, but more usually stenosis results.

Experiments made on dogs have shown that the ureter may be dilated and the normal proximal end be slipped into the dilated distal one and fixed there by one or two sutures as has been done by Kelly. The author was forced to dilate a normal distal end enough to receive a dilated proximal one. He then used three puckering sutures, fixed the ends in place with them, completed the closure by sutures at the margin of the slit, and the operation proved a complete success.

Dr. Alexander Hugh Ferguson discusses the

Operative Treatment of Vesico and Recto-vaginal Fistulæ

and after describing various methods which have been in vogue, gives one which has been devised by himself.

The knife is entered an eighth of an inch from the margin of the fistula and a cut made parallel to this around the opening and extending to the vesical mucous membrane, care being taken not to injure the latter. The ring marked out is now carefully separated from the mucous membrane until it can be turned over, when the opening is closed by carefully suturing the fresh edges.

This being done other sutures are entered in the untouched tissue surrounding the part denuded, care being again taken to avoid piercing the vesical mucous membrane. Tightening these sutures forces the flap previously described into the bladder as a ridge, and this seems to insure success.

Other papers in this issue are Remarks on Etiology and Treatment of Pelvic Inflammation, by Dr. R. Stransbury Sutton; Emmet's Operation for Laceration of the Cervix Uteri, by Dr. J. Duncan Emmet; Vaginal Hysterectomy, ect., by Fernand Henrotin; Abdominal Hysterectomy, etc., by J. T. Binkley; Sterilization of Catgut by Dr. Collis H. Johnston; The Relation of Chorea and Rheumatism in Children, by Dr. G. Wythe Cook; Abdominal Surgery in China, by Dr. Elizabeth Reifsnyder; Fatal Postpartum Hemorrhage Eighteen Days After Labor, by Dr. E L. Tompkins.

EDINBURG MEDICAL JOURNAL.

Dr. Alexander Bruce reports a case of

Rupture of an Aortic Aneurism into the Superior Vena Cava.

A stone mason, fifty-seven years of age, married, was seen complaining of dyspnœa, and appearing very cyanotic. For five or six years he had had a bad cough which became worse during the last few months. A few days before being seen by the writer he thought he caught cold, as his breathing was interfered with, but he was somewhat relieved by venesection. He had been a moderate drinker, and had a history of an old attack of syphilis. No history of an unusual exertion preceding this attack of dyspnœa. The skin of the face, neck, thorax and arms was cyanotic and œdematous, the abdomen and lower portions of the body normal. There was an elastic swelling above both clavicles, the external jugulars projected as purple cords, but without pulsation and could be emptied by pressure. Over the base of the heart auscultation showed a peculiar murmur. "This was continuous, somewhat like a venous bruit, very loud, having an almost musical swishing sound. The sound was most intense during ventricular systole, almost dying away during diastole."

The point of maximum intensity lay on the sternum at the level of the third costal cartilage. It was propagated toward the right, and it diminished suddenly at the left sternal border, except opposite the fifth cartilage where it could be well heard an inch to the left of the sternum. No albuminuria at first, but it developed later.

Postmortem examination showed an aortic aneurism about half the size of a man's fist extending from the valves to the origin of the innominate artery. It had pushed the superior vena cava backward and there were two ulcerations into it—one about one-quarter and the other about three-sixteenths of an inch in diameter. The large veins in the neighborhood were greatly dilated, and the trachea and bloodvessels were surrounded by a dense fibrous mass in which was found a node supposed to be a gumma.

The attending physicians had noticed that the point of greatest intensity of the murmur had suddenly risen from the third to the second cartilage. This was explained postmortem by finding the two ulcers into the vena cava, the upper being of more recent formation.

BROOKLYN MEDICAL JOURNAL.

At the Brooklyn Surgical Society, a case was reported of injury to the posterior interosseus nerve in reducing a dislocation and fracture at the elbow. The subsequent paralysis disappeared without operation.

Tuberculosis of the head of the humerus was mentioned as a comparative rarity in adults, and a case was reported in which excision gave a useful arm. In children continuous extension is easily maintained by slinging the wrist to the neck but results of course in anchylosis.

In the *Physician and Surgeon.* Dr. J. R. Dodge writes of

The Rectal Tube.

Two cases are recorded; in one of which a diagnosis of malignant stricture of the colon was made and could be confirmed in no other way until the autopsy. In the other case a man had intussusception of the colon and, positively refusing operation, was finally relieved by a forcible injection through a long rectal tube. The report is very interesting on account of the heroic treatment used.

Dr. C. H. Hughes gives a psycopathical apology for Cain's fratricide—inspired by Mark Twain's lament for Adam.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

Dr. Thomas Y. Aby writes of

Continued Fever.

The disease referred to seems to the author to be displacing the severe malarial fevers formerly seen in his neighborhood, and he gives the chief characteristics as follows: Males are much more frequently attacked than females, nursing infants never, and elderly men rarely if ever, Africans though rarely attacked have the disease severely and lasting for a long time when attacked; rich and poor suffer equally, and although formerly seen during the summer and fall months, it now appears throughout the year.

Personal observation led the writer to believe this disease due to faulty excretion of tissue waste (not to a specific germ) but recent port-mortem investigations by other men seem to show it to be an atypical typhoid.

The poison seems incapable of elimination through the skin, liver, kidneys, etc., and the duty seems to fall on the mucous membrane of the small intestine. The author's reason for holding this view being that while the liver, kidneys, etc., are acting normally, and there is usually no tenderness anywhere, the stools will be found with an unusal amount of mucus, indicating an engorgement and unusual secretion in the intestinal coat, and this he believes to be the means adopted for the excretion of the poison.

The course of a typical case is as follows: Usually after a varying period of malaise the patient goes to bed and is seen with a pulse beating between ninety and one hundred and twenty and not varying with the temperature; which is usually between 100° and 102° in the morning and slowly rising from one and one-half to three degrees toward night, the tongue is usually pale, clean, and moist in the morning and may get harsher toward night. The appetite is poor; but the other symptoms common to most fevers, flushed features and thirst are much less marked. There is apt to be some constipation, and the abdomen soft and flat except for some rigidity of one of the recti. Nausea, vomiting, and pain of any kind, even headache, and de-

lirium of any degree even with continuous high temperature are usually absent.

The author can recall no exception to the rule of absence of delirium. Without showing any effect from treatment this condition goes on for probably from ten to thirty days, and then begins slowly to abate. After disappearance of fever, recovery is rapid and as after yellow fever better health is usually enjoyed than before the sickness.

The absence of headache in a case of fever particularly if any tension of the recti could be discovered would suggest this fever, for there are no pathognomonic symptoms.

In regard to treatment—after making use of all the recognized remedies for similar conditions the author has learned to depend on opium—a teaspoonful of camphorated tincture or fifteen or twenty drops of laudanum to an adult every six or eight hours by the rectum. In defence of his use of this drug the author states that he does not think that it stops secretion in these doses, but allays irritation and therefore may appear to do so. Other drugs may be used if symptoms calling for them seem prominent.

Where the patient cares for it butter milk seems the most satisfactory food, and is given to the extent of about a quart daily. If averse to butter-milk, soups, broth, beef essence, etc., may be used, but never solid food, nor, the author says, sweet milk. Lemonade, soda water, etc., are allowed as desired.

Food is given every three hours from 6 A.M. to 9 P.M., at which time the fever is usually at its height, and a tepid bath being given the patient is not again disturbed until morning.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

SURGERY.

Hypertrophy of the Mammary Glands.

The diffuse form of hypertrophy of the mammary gland is known to be extremely rare. According to Roger Williams, out of 2,422 cases of mammary neoplasms which were consecutively under treatment in four London hospitals during a period of from 16 to 21 years, only six cases of diffuse hypertrophy were seen. In this connection, then, a case just recorded in the *Journal of the American Medical Association* by Dr. J. B. Hamilton is of more than ordinary interest (*Med. Press*). The patient was thirty-two years of age, and had been married eighteen years when she came under treatment for enormous hypertrophy of the breasts. The right breast measured 30 inches in circumference at the nipple and the left 39. The right breast also measured 30 inches around the pedicle and the left 27. Again, from the nipple to the pedicle the right measured 14 inches and the left 13½. The patient was unable to walk without assistance owing to the great weight and bulk of the organs. The first step in the operation for the removal of the right breast was that of passing two long pins through the pedicle, and tying the pedicle tightly between the pins and the chest. The breast was then removed by cutting two flaps of skin from the tumor, reflecting them respectively upwards and downwards, and enucleating the glands; the vessels were secured without difficulty. The hemorrhage was considerable, but it was almost entirely from the blood remaining in the gland. After removal the gland was found to weigh 27½ pounds. The wound healed by the first intention, and the patient did well. About three weeks after the first operation the left breast was similarly removed, and the combined weight of the two glands amounted to no less than 50 pounds. The patient made a good recovery after the second operation.

Dry Surgery in Germany.

The American practitioners and student of medicine who have been trained to look upon irrigation as essential to the aseptic handling of wounds in their after-treatment, are always quite astonished at the apparent diregard the German surgeon seems to have for this method of securing good results. While in Gottingen, I was present every dayat the surgical polyclinic held daily by Professor Rosenbach, and I do not believe I saw a drop of water or other irrigation fluid used during the whole time. The patient is brought in, the dressing removed, the wound examined, squeezed lightly, oozing pus is wiped off and dressings, dry or wet as may be necessary, are reapplied. Even in the treatment of deep abscesses, or where neurotic processes are going on, irrigation is never resorted to, the surgeon seeming to have all faith in his drainage tubes, without resorting to the stream of bichloride water as used by our American surgeons. They probably get just as good results here in Germany as we do in the United States, but their methods of wound-handling are certainly not so cleanly as those used in the latter country.

Simple Treatment of Ganglion.

Duplay (quoted by *Lyon Medical*) describes a simple, safe, and invariably successful treatment for this troublesome affection. This consists in the injection of a few drops of iodine into the cyst. Such injections must, of course, be practised under antiseptic precautions, the needle being driven in

at the point where the cyst is most prominent, the skin having first been drawn aside so that a valvular opening is made. The cyst is not previously evacuated, but the iodine is driven directly in. A small antiseptic dressing is applied with a bandage. Cure is accomplished in five or six six days. Sometimes in large cysts a second injection is necessary.

The Influence of Fatigue on the Auditory Functions

The New York *Medical Journal* says that in order to study this question, the author made examinations of twenty-four bicycle-riders after they had ridden thirty two miles in two hours and a quarter. Two of the men complained of subjective noises only, while in nearly all of them the perception of sounds by ærial conduction was less marked than in the normal condition, and Rinne's experiment showed negative results. In the riders who were subjected to an examination with tuning-forks a slight diminution in the perception of loud sounds was ascertained. The only lesion noticed was a slight hyperemia of the drum membrane.

The competitors were again examined after a rest of from two to seven hours, and in six of them the auditory power was found to be the same; in two it was not so good, and in the sixteen others it was better, the ærial perception having increased from a few centimetres to a meter and a half, and Rinne's experiments gave positive results. The men in whom the amelioration was the most marked, in whom, consequently, the hearing had undergone the greatest change, were whose who had had little experience or training.

Physicial fatigue, says the writer, evidently causes a temporary weakening of the auditory power. This fact demonstrates, besides, he says, that the effects produced by great physical exercise are not shown by muscular fatigue only, but they remotely affect the entire organism and especially the nervous system, and the special senses, on account of the delicacy of their functions, are more likely to reveal the effects. The enervation shown by birds of passage after a long flight is a phenomenon of the same nature as that observed by the author in the examinations referred to.

The Treatment of Floating Kidney.

Riedel (Reineboth in *Cent. f. Chirur.*) performed nephrorrhaphy in eight patients. As a result of this experience it was found that sutures made to include the renal structure and surrounding adipose tissue were insufficient for the purpose, and suture of the fibrous capsule alone by means of a catgut was subsequently substituted. This, however, only permits of fastening of the lower half of the organ, or that portion which projects below the twelfth rib, and fixation of the upper half must be accomplished by some other method. This is done by splitting the fibrous capsule for its entire length at the posterior edge of the kidney, loosening it from its attachments to the latter as far as possible, and tamponing the space thus formed by means of a strip of iodoform gauze. The gauze is pushed as high up as possible between the exposed renal surface and the diaphragm. The remainder of the wound is allowed to remain for several weeks, and upon its removal two broad granulating surfaces are to be found lying opposite to each other. These become attached in the future progress of the healing, and the kidney thus becomes secured along its whole posterior border. The results thus far obtained are sufficiently encouraging to warrant further trial of the method.

The Differential Diagnosis of Infantile Scurvy.

Dr. J.H. Fruitnight (*Archives of Pediatrics*) summarizes our knowledge of scorbulus as follows:

It is the result of a faulty nutrition which leads to a deviation from the normal chemical composition of the blood, probably a deficiency of its alkalinity.

The disease is characterized by a blood dyscrasia accompanied by structural changes in the coats of the blood-vessel.

The bone and joint lesions, the spongy condition of the gums, and the petechiæ constitute a triad of symptoms highly pathognomonic of the disease. One or both of the two last named symptoms may be lacking.

The order of development of the symptoms seems to be: First appear the tenderness and swellings of the lower extremity, then the sponginess of the gums, and finally the hemorrhagic extravasations.

Under the treatment these symptoms begin to improve in the same order of sequence, the epiphyseal lesions disappearing more rapidly than the other two.

If there be any doubt of the diagnosis of a given case, recourse should be had to the therapeutic test of an antiscorbutic regimen, which will by its results, in a comparatively short space of time determine the question beyond cavil.

The prognosis is nearly uniformly favorable under proper treatment, and the likelihood is that as physicians become more familiar with and competent in diagnosticating the disease, its mortality will be reduced to nil.

The main principle involved in the treatment of infantile scurvy is comprised in the institution of antiscorbutic dietetic measures.

Loeffler's Solution for Topical Use in Diphtheria.

Methol	10 grains
Toluol	36 cubic cen
Absolute alcohol	60 cubic cen
Solution of ferric chlorid (U. S. P.)	4 cubic cen

When much sepsis exists, two cc. of creolin or metacresol, are substituted for the ferric chlorid solution. We should prefer gualacol. The therapeutic value of this solution is attested by many competent observers. The application is quite painful, and cannot be born by the nose or larynx. —*Polyclinic.*

The Use of Cocaine to Prevent Respiratory Disturbances During Chloroformization.

It is quite possible that others have been struck by the ease with which a patient whose tonsils and post-nasum have been pencilled with a solution of cocaine previous to the use of chloroform takes the anesthetic. For some time I have practiced this use of cocaine in tonsillotomy and removal of adenoids after having noticed the comparative freedom from hemorrhage in a case where I attempted, but without success, to operate under cocaine alone, and had to give a general anesthetic. In this case the tonsils were removed with very little hemorrhage indeed, and I was able at once to remove the adenoids unhampered by hemorrhage from the tonsillar stumps. Apart altogether from the fact that cocaine thus used eases the subsequent use of chloroform (or ether), this circumstance of the freedom from hemorrhage in an operation (tonsillotomy), where such is always dreaded, ought to be freely observed. Before the action of the cocaine is over the patient is already conscious, and ice can be employed to prolong its effect. I should say that the cocaine, which need only be applied in weak solutions (two per cent.), reduces the loss of blood in the double operation of removal of tonsils and adenoids by over fifty per cent.

Rosenberg, of Berlin, has recently drawn attention to the fact that if the mucous membranes of the upper air-passages are anesthetized by cocaine before the administration of chloroform, the disturbances consequent upon their irritation are obviated. This author has found by experiments that at the beginning of anesthesia, if the blood pressure be considered as equal to 100, the systole is represented by 210, and the diastole by 40. Under normal conditions, on the contrary, the blood pressure being the same, the systole is represented by 110, and the diastole by 90. These modifications are due to respiratory disturbances consequent upon irritation by the chloroform of the mucous membranes of the upper air-passages. In two or three cases of my own where this combination of general and local anesthesia has been employed, less chloroform has apparently been used, and the patient went under with less struggling and fright, and more quickly. In strabismus operations cocaine furnishes a field free from hemorrhage, but as it abolishes sensation in the conjunctiva, it might prove embarrassing to the chloroformist.— *William Robertson, M.D., in British Medical Journal.*

Aristol in Oral Surgery.

In a comprehensive treatise on "Diseases and Surgery of the Mouth, Jaws, Teeth and Associated Parts" by Dr. James E. Garretson, which has been just issued from the press of J. B. Lippincott Company, the author speaks as follows of Aristol;—"This powder is to be highly recommended for its antiseptic and curative qualities. Advantage over iodoform lies with absence of odor. Aristol is an amorphous powder of red-brown color. It is insoluble in cold water and glycerine. It dissolves in chloroform, ether and benzine. Water heated to 140° F. dissolves it. It is also reasonably soluble in alcohol. Aristol is not toxic nor are there recorded any cases of ill results attendant on its use as a surgical dressing. Sifted over ulcers or used dusted upon the seat of a surgical operation its use proves most satisfactory. A salve made by rubbing it up with vaseline is highly recommended: of the prescriber proportions may vary at pleasure." In the chapter on epithelioma Dr. Garretson comments as follows on theuse of Aristol: "The author has found muchservice in the free employment of chlorate of potassium in a finely pulverized form. This powder is furnished the patient and he is directed to apply it freely. Where the chlorate of potassium fails, trial of Aristol is recommended by Dr. Brocq, who claims to have secured by its employment most satisfactory results; the application is entirely painless; its use is restricted to ulcers of superficial character.

Local Application of Carbolic Acid.

Cerne, of Rouen, reports the two following cases in the *Normandie Medicale:* A diabetic male had an insignificant wound of the leg dressed with a compress wet with a weak carbolic acid solution; this produced gangrene which increased in size daily. The patient went to an empiric who replaced the carbolic acid by an ointment of some sort and the gangrene was arrested. The second case was that of an alcoholic, with sclerosis and perforating ulcer of the left great toe; this was dressed with a carbolic solution of 1 to 40; on the second morning all the end of the toe was gangrenous. These cases show the dangers which may result from the local application of carbolic acid, especially if made by the patient himself—that is to say, without precaution or measure. Caution should be exercised in the use of carbolic dressings; the danger is greater when, from any cause, the tissues have less than their normal vitality.

Treatment of Hydrocele.

A letter from France to the *Med. Press and Circular* says that the classical treatment of hydrocele, puncture and injection of tincture of iodine or some other irritating liquid, has been rendered much more simple by a surgeon who has published the result of several cases cured rapidly by the method. He inserts the trocar into the most dependent part of the tumor and removes the liquid; he then injects a five per cent. solution of carbolic acid, which is removed almost immediately. The trocar is introduced a second time into the canula, and pushing it up toward the highest point a counter-opening is made. The trocar is again withdrawn, and a drainage tube is passed through the canula and left in position, the canula being removed. The patient can immediately get up and walk about. The drain is withdrawn on the fourth day and in a week the man is cured.

Catheterization of the Ureters

Dr. Brown, in Johns Hopkins *Hospital Bulletin*, states that with Brenner's modification of Leiter's cystoscope he has found little or no difficulty in catheterizing the ureters in the male or female subject.

The bladder should contain from 150 to 200 c.cm. of fluid or even more. The writer then passes the anterior cystoscope and takes a complete survey of the bladder. This having been done he replaces it with the Brenner instrument which is passed with the stylet fixed.

The ureteral orifices are next searched for, and when these are found the stylet is removed and the catheter inserted and passed nearly to the inner opening of the canula. The ureteral orifice is again sought for and the catheter passed into it. To prevent kinking of the catheter and to guard against exerting undue traction upon the ureteral orifice the cystocope must be kept in line with the catheter so long as the latter is within the ureter. Sometimes it has been found advantageous to give the catheter a slight curve at the tip. Nitze claims that the difficulty in catheterizing the male ureter is greatly lessened by passing through a special canal fixed to the cystocope an elastic catheter, the end of which is made to take a direction when in the bladder corresponding to that taken by the lower extremity of the ureter as it passes through the vesical wall.—*N. A. Practitioner.*

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM MAY 12, 1895, TO MAY 18, 1895.

Captain Charles Richard, Assistant Surgeon, will when relieved from duty at the Military Prison Fort Leavenworth, Kansas proceed to and take station at St Louis, Missouri, for duty as Attending Surgeon, and Examiner of Recruits.

Captain Peter R Egan, Assistant Surgeon, is relieved from duty at Fort Custer, Montana, and ordered to Fort Assinniboine, Montana for duty, relieving Major Charles B. Byrne, Assistant Surgeon. Mayor Byrne on being thus relieved is ordered to Fort Snelling, Minn. for duty.

Major William C. Shannon, Surgeon, upon the expiration of his present leave, is ordered to Fort Custer, for duty.

1st. Liet. Deane C. Howard, Assistant Surgeon, will be relieved from duty at Fort Snelling Minn. upon the arrival there of Major Charles B. Byrne Surgeon, and will then proceed to Fort Custer, Montana, and report for duty, at that post.

Captain Alonzo R. Chapin, Assistant Surgeon, having been found by an Army retiring board incapacitated for active service on account of disability incident to the service, is by direction of the President retired from active service this date May 10, 1895.

Leave of absence for four (4) months, to take effect on being relieved from duty at Fort Thomas, Kentucky, is granted Captain William J. Wakeman, Assistant Surgeon, U. S. Army.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE FIFTEEN DAYS ENDING MAY 15, 1895.

Wheeler, W., Assistant Surgeon: detailed as Chairman Board for Physical Examination of applicant for appointment in Revenue Cutter Service, May 13, 1895.

White, J. H., Passed Assistant Surgeon; detailed as Recorder Board for Physical Examination of applicant for appointment in Revenue Cutter Service, May 13, 1895.

Carrington, P. M., Passed Assistant Surgeon; granted leave of absence for fourteen days, May 4, 1895.

Cobb, J. O., Passed Assistant Surgeon; granted leave of absence for fourteen days, May 1, 1895.

NEWS AND MISCELLANY.

Deer Park on the Crest of the Alleghenies.

To those contemplating a trip to the mountains in search of health and pleasure, Deer Park, on the crest of the Allegheny mountains, 3,000 feet above the sea level, offers such varied attractions as a delightful atmosphere during both day and night, pure water, smooth, winding roads through the mountains and valleys, and the most picturesque scenery in the Allegheny range. The hotel is equipped with all adjuncts conducive to the entertainment, pleasure and comfort of its guests.

The surrounding grounds, as well as the hotel, are lighted with electricity. Six miles distant, on the same mountain summit, is Oakland, the twin resort of Deer Park, and equally as well equipped for the entertainment and accommodations of its patrons. Both hotels are upon the main line of the Baltimore and Ohio Railroad, have the advantages of its splendid Vestibuled Limited Express trains between the East and West. Season excursion tickets, good for return passage until October 31, will be placed on sale at greatly reduced rates at all principal ticket offices throughout the country. One way tickets, reading from St. Louis, Louisville, Cincinnati, Columbus, Chicago, and any point on the B. & O. system to Washington, Baltimore, Philadelphia or New York, or vice versa, are good to stop off at either Deer Park, Mountain Lake Park or Oakland, and the time limit will be extended by agents at either resort upon application, to recover the period of the holder's visit.

The season at these popular resorts commences June 22d.

For full information as to hotel rates, rooms, etc., address George D. DeShields, Manager, Deer Park, or Oakland, Garrett County, Md.

—4-t. CHAS. O. SCULL,
General Passenger Agent
B. & O. R. R.

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ORIGINAL ARTICLES.

ARTICULAR RHEUMATISM: ULCERATION ENDOCARDITIS; EMBOLISM.*

CHARLES CARY, M. D.,† Buffalo, N. Y.

I purpose showing you this morning, the clinical picture of a serious and not very common malady and, as an introduction, I have brought before you a patient whom you have seen in the ward-class and whose disease is a comparatively common one.

This man is 48 years old; he is employed in the railroad yards, doing both indoor and outdoor work and, therefore, exposed to sudden changes of temperature and compelled to undergo the vicissitudes of the weather. He is now recovering from a moderately acute attack of articular rheumatism. It is acknowledged by almost, if not quite, every authority that such exposure as he has undergone, is the exciting cause of the outbreak of rheumatism. It is a disease to be found among the drivers, the street-car and railroad men, the mechanics who are at work for long hours out of doors; in short, it is to be expected among all who for any reason are exposed to the inclemency of the weather.

The patient represents the type of man physically, that is apt to be affected with this disease. He is in the prime of life, apparently well nourished, and he has had no other illness since the usual fevers of childhood. Acute articular rheumatism seems to have a predilection for the hearty, well nourished, wholesome individual. It usually, however, makes its first appearance earlier in life. The left knee was the first joint affected but there is no longer any redness or evidence of acute inflammation in this articulation. It is characteristic of this malady that the inflammation leaps from one structure to another, the poison being in one joint on one day, passing to another the next, while the first affected joint regains its normal condition in a few days, sometimes in a few hours, and often invading the endocardium in the course of the disease. Here, the right knee, which was invaded after the left, is still quite tender and distended while the disease has involved also, the right shoulder and some of the smaller joints of both hands. A few days ago, the left knee was greatly inflamed and the patella could be knocked against the femur, showing an effusion in the synovial sac. Sometimes, when the synovial sac is not much distended, the patella is not forced up from the condyles and, in order to elicit the sound of impact against the femur, it is necessary to press over the upper part of the joint cavity so as to squeeze all the fluid into one part of the sac. In the left knee, this sign can no longer be obtained, but in the right knee I can get the sensa-

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tion of impact though, on account of the small distance that the patella can move, you can not hear the sound as you could in a more recent case.

The patient has had a very painful illness, the suffering of articular rheumatism being greater than for many more serious diseases. There is a time-honored comparison between rheumatism and gout which likens the pain of the former to that produced by putting a limb in a vise and screwing it up as far as possible, while the pain of gout is stimulated by giving the screw one more turn. I believe, however, that the comparison was made by a gouty subject and that acute rheumatism is as painful a disease as there is. The patient has not had a very high run of fever; for several days, the temperature was about 101°, dropping yesterday to 99°, in the morning and rising again in the evening to 100°. A single sample of the urine was of deep red color, acid reaction, and of a specific gravity of 1024. There was no albumin, sugar or sediment. The patient had copious sweats which were acid and sour in odor. These sweats are characteristic and they are often so acrid that sudamina are produced from their irritation.

In all cases of rheumatism, the heart should be frequently examined, for there is no other malady that so commonly causes endocarditis as does acute articular rheumatism. At no time during the malady has this man presented symptoms of cardiac invasion. It is not so much a surprise to me that rheumatism frequently induces cardiac inflammation as that it does not more often cause it. If you stop to estimate the friction at the cardiac orifice, you will be compelled to acknowledge that part of the heart is subjected to a tremendous amount of wear and tear. You have seen the physiological experiment with a column of mercury of water showing the pressure of the heart on the blood current. It is estimated that the left ventricle of the human heart exerts a pressure of about 55 pounds. Even at an estimate of 50 pounds, with the heart pumping away at the rate of 100 beats per minute, as it has done in this man's case for days, the amount of energy expended in the course of 24 hours is something enormous. Now, if in addition to the mechanical irritation of the rapidly moving blood current, the blood contains chemical poisons, an inflammation is very apt to occur and it locates by preference at those parts of the endocardium where the passage is narrowest and where the friction is greatest, in other words: at the valvular orifices and particularly those of the left side of the heart where the pressure of blood is greater. If, in the process of inflammation, part of the endothelium is raised up above the common level, or if a fragment is detached leaving a raw surface, the conditions are favorable for the coagulation of the blood, and a deposit of fibrin is made, forming what is known as vegetation.

With most maladies, the very name of the disease implies the degree of danger of the case. Typhoid fever, pneumonia, etc. Endocarditis, however, is an exception to this rule. A person may have endocarditis and yet not be sick at all, in the ordinary sense of the word; or he may be extremely ill. The development of rheumatic endocarditis does not, as a rule, materially influence the course of the fever. There is commonly a slight rise of temperature and some irregularity of the heart which calls your attention to it, although your examinations should anticipate any cardiac involvement. In an acute rheumatic endocarditis the heart is evidently laboring under difficulties. Its rhythm is perturbed and you can hear the murmur which the increased friction of the blood current over the roughened valvular orifice causes, or which is due to a slight leakage backward of blood. Too much prominence should not be attached to this sign, for the loudness or softness of the murmur is not proportionate to the severity of the lesion. The symptoms from which the patient suffers are much more significant.

In regard to treatment, the joints were wrapped and the patient was kept very carefully protected with blankets from drafts. He was offered drink very freely, especially in the form of milk and alkaline waters. Meats were excluded from his diet and he had little solid food of any kind. I gave him morphine because I believe it lessens the work of the heart by lowering the vital requirements and by doing away with that part of the cardiac strain which depends directly on pain. Unless there is some reason to fear the establishment of the morphine habit, I believe it is well to introduce morphine in

the treatment of acute rheumatism at the start, in order to throw out as far as possible, the element of cardiac labor which is a determining factor in the production of endocarditis. Salicylates, usually administered in the form of the sodium salt, are indicated to aid in the elimination of the poison and in reducing the temperature. Sixty centigram to one gram doses are given every two or three hours, and pushed to the point of partial relief from the subjective symptoms of pain and fever. Then the doses are diminished or given at longer intervals. The bowel should be kept rather loose by salines, Rochelle salt being given in this particular case.

Like all other infectious diseases, rheumatism will run its course. You do not pretend to abort typhoid or scarlet fever, you simply guide the patient through the disease. By diminishing the patient's suffering, by lessening the amount of poison with which he has to contend, you make him more comfortable and tend to protect him from the danger of cardiac complications, but you probably do not materially shorten the duration of his illness.

ULCERATIVE ENDOCARDITIS: EMBOLISM.

This man is fifty-three years old, single, a German by birth, and a shoe-maker by occupation. The family history is negative except that one sister died of consumption. As to personal history, he had gonorrhœa thirty years ago, and there is a syphilitic history dating back twenty-five years, but the only statements are with regard to chancre—he had no after symptoms. This is an important point, for it throws a good deal of discredit on the supposed attack of syphilis. About the same time he had an attack of rheumatism affecting the arms, hands and legs. This rheumatic trouble lasted five years. Since then, he has been well until about four weeks ago.

Inquiring more particularly as to the rheumatism, I learn that he had palpatation of the heart before the rheumatism, and that there was no very acute fever. It is impossible to say at this late date whether the so-called rheumatism was really rheumatism or not. Four weeks ago he went to bed feeling as well as usual, but when he awoke in the morning he noticed a large yellow blister on the outside of the left leg, which he pricked with a needle and which discharged a quantity of matter. Three or four days later, the sore had become covered with a dry, black crust, which you can still see. It is, evidently, a localized gangrene affecting an area about two inches by one and a-half in diameters, and rudely triangular in shape. Six days ago, he had a swelling of the scrotum and penis. He worked until compelled to go to bed, when he was sent to the hospital. For several days previously, he had had feverat night, at least he thinks so from his sensations, but his temperature was not taken.

I do not know but that I make a mistake in bringing this case before you without having made a further study of his symptoms, but there is something so unusual and interesting about his disease that I prefer to study the case with you and, if necessary, revise my opinion of the nature of the trouble, rather than run any risk of you missing an opportunity that may not present itself again in a long time.

On examining the sore on the leg, we find at least a quarter of an inch of sloughing tissue. Except that it is not at the distal end of an extremity, this looks not unlike a senile slough, and it certainly is an instance of dry gangrene. Occurring without any history of traumatism, we must ascribe this phenomenon to some internal cause which has cut off the blood supply. The dry slough forms a practically aseptic dressing, and the sore interferes with the patient's comfort in no respect.

Let us turn our attention to the scrotum and see if there is any connection between the two lesions. You will frequently see œdema of the scrotum in cases of general dropsy, but here there is no swelling of other parts, and even the swelling of the scrotum, though undoubtedly containing some serum, is not at all what we should speak of as œdema in the passive sense. The penis and scrotum have a hard, tough consistency, the skin is reddened and hot, and the whole appearance is that of an acute inflammation. I apprehend that there is suppuration. The patient's countenance is pallid, the pulse has ranged for several days between 90 and 100, and the temperature has risen to 103° daily since he has been in the hospital. All this suggests an abscess.

The urine for twenty-four hours amounted to 800 c.c., was of a reddish tint, of acid reaction, of a specific gravity of 1018. There was no albumin, no sugar, no sediment. The excretion of urea amounted to 12 grams; about what we should expect for a rather small man on limited diet and with some depressing illness.

The cardiac apex is almost directly beneath the nipple, and its beat can be felt an inch outside the nipple line. The area of cardiac dullness is correspondingly increased. When the patient entered the hospital, the heart was intermittent and irregular. It has now become steadied by the care and medication which he has received, but there are still plainly audible three murmurs, a mitral regurgitant, an aortic direct, and an aortic regurgitant. Before speculating as to whether we can find any logical connection between the results of our examination and the obvious lesions which the patient presents, let us determine exactly what the condition of the scrotum is. An aspirating needle is passed into the right scrotum and apparently through into the testicle, and now pus is withdrawn. The pus is of an extremely offensive odor and is in considerable quantity. After the medical clinic, I will ask Dr. Park to open the abscess freely and evacuate this source of poison.

The explanation that I would offer of the occurrences of this case is as follows: An embolus has lodged in one of the smaller arteries of the leg, cutting off the nutrition from a limited area. This area is so superficial that the necrosis which developed speedily reached the surface and now appears as a gangrenous ulcer. The abscess of the testicle has developed in the same way but, the plugged artery being deeply seated, the process has gone on under cover. Following the embolism, a hæmorrhagic infarction has occurred; that is, from the sudden removal of blood pressure from behind, there has been a setting back of venous blood and stasis. For two or three days, the scrotum was as white as the skin of a dropsical patient and there was nothing to suggest pus.

In many instances, embolism occurs without the formation of pus; why should such a development occur here? Let us refer to the condition of the heart. Whether or not the history of rheumatism is significant, we have the evidence of an endocarditis which, from the enlargement of the heart and the lack of acute illness till very recently, must have lasted for some time. The murmurs at the valvular orifices indicate an inflammation at those sites in particular. Now, if we suppose that one of the little vegetations has become broken off and carried into the aorta, it is simply an accident as to where it may be carried and where it may lodge, but wherever it lodges we should expect the nutrition of the part to be profoundly altered. This accounts for the localized gangrene of the leg; it accounts for the formation of a hæmorrhagic infarction in the testicle, but it does not account for the plainly infectious character of the lesion in the testicle unless we assume that the endocarditis has taken on a septic element and has become an ulcerative or malignant endocarditis. Presupposing this, we can readily comprehend how the embolism has led to a septic thrombosis which has extended, involving the veins in a septic phlebitis, and how, from the breaking down of the tissues, this terribly offensive abscess has formed.

My attention has been called to a difference between the radial arteries of the right and the left wrist. This has no significance, however, as the right fore-arm has been broken and the superficialis volæ is given off at a higher level than usual.

Judging from the record of this kind of cases in the past, I do not feel warranted in holding out a favorable prognosis. With the vegetations on his cardiac valves, he is apt to have an embolus thrown into the blood current at any time. Thus far he has been lucky in having the emboli lodge where they are accessible, but there is nothing to prevent them from reaching deeper and more vital parts. The patient may develop an hepatic abscess, or a similar infectious process may be set up in the brain. It is as much a matter of chance as is the throwing of dice. There is no reason to apprehend any serious trouble from the abscess of the testicle, and certainly we need not concern ourselves about the localized gangrene of the leg. But I know of no means of disinfecting the diseased area at the fountain head of life—the heart. If other abscesses develop, they must be opened.

One other point must be considered, the possibility of a syphilitic infection and consequent heart lesion. If the endocarditis is of this nature, the prognosis is

more favorable. With this hope, I shall order small doses of potassium iodid and some form of mercury, but I shall not stake very much on their therapeutic value. We must support, nourish and stimulate the patient, and at least make him temporarily comfortable. Sooner orlater, the detachment of an infectious particle from the cardiac orifice will determine his rapid dissolution.

NOTE.—A week after the clinic the patient was shown in a state of temporary improvement. He walked into the arena, the abscess of the testicle had been freely opened and had almost ceased to discharge. No perceptible change had occurred in the sphacelus on the leg. The patient was perfectly comfortable. The possibility of other forms of embolism or arterial thrombosis was considered. Diabetes was excluded, and although the patient had eaten rye bread, there was no evidence of ergotism. He was discharged well, with great improvement of cardiac sounds.

CLINICAL NOTES ON A RECENT SERIES OF SURGICAL CASES.*

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The successful practice of surgery is not altogether unlike the cultivation of a garden; the yield will in all probability depend not so much on the richness and fertility of the soil or a favorite season, as on the knowledge, the experience, and the industry of its cultivators.

Though much, in isolated instances, may depend on chance and fortuitous circumstances, our chief reliance, in the end, must rest on the firm groundwork of matured knowledge and extended effort. The cases here submitted, have all come under my care and observation since the first of this year, and are selected because they belong to a class which commonly come before us, and of which it may be said that now, after more than twelve years' experience, in dealing with a very considerable number of them the writer is enabled to report successes and results altogether in advance of what would have been possible at an earlier period. For time and observation have convinced me that even moderate success in the treatment of complicated surgical cases, is utterly impossible without abundant opportunities for practice, together with a familiarity with the latest and the best work of contemporaries in our own and foreign countries.

The cases selected for presentation here are of traumatic and pathological order, regional and general.

CRANIAL LESIONS—FRACTURES OF THE SKULL—TRAUMA.

Since the first of March, 1895, there have come under my care ten cases of fractures of the skull—four basilar, occupying the most vital, the cerebral and cerebellar regions; and six cases of fracture of the vault, the non-vital. The patients ranged in age from nine to fifty-six years; there were nine males and one female; three were fatal, and seven recovered.

It may be said that this class of fracture is yearly becoming more common in New York. The immediate dangers attendant on cranial fracture, arise in consequence of shock, hemorrhage and inflammation. The features of special interest in connection with the cases here enumerated, are, first, those with reference to basilar fracture involving one or more of the cranial fossæ. We had quite unequivocal symptoms of this lesion; as a free discharge of sero-sanguinolent fluid from one or both ears, with a free extravasate into the subjacent tissues.

Traumatic depression of the bone substance of the skull is not attended with such definite symptoms of sensory or motor disturbances as we would be led to expect since the doctrine of cerebral locali-

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zation has been promulgated. The most constant evidence of local injury to the cortical substance of the brain with such aphasic symptoms as pointed to local compression, was where there were distinct marks of inward displacement of fractured bone over the fissure of Rolando or the middle parietal convolutions.

My general line of practice, in cases of fracture through any area of the cranial vault attended with a moderate indentation of bone but no cerebral symptoms, is to not interfere with a view of elevation or displacement. This line is especially adhered to when the seat of displacement is over any of the large sinuses.

Cocaine as an Analgesic.—In the operative technique for elevating shattered and displaced fragments of late we have substituted pulmonary anesthetics altogether, by employing local cocaine analgesia. This change has been most advantageous to the operator, in lessening hæmorrhage by the well-known hæmostatic action of the medicament, and obviating the necessity of so many trained assistants as would be otherwise rendered nececessary.

The difference of the effects consequent on the utilization of this line of treatment is vastly in our patient's favor, as by it there is no such engorgement of the cerebral vessels as we always observe under ether; as no cerebral excitation at a period when it is obvious that violent commotion of the cerebral centres must be harmful to our patient; and persistent vomiting after operation is entirely obviated.

Debridement instead of the trephine.—Except in rare instances the trephine has been entirely displaced with me by the osteotome for elevating and removing depressed bone fragments in skull injuries. By its cautious employment there is much less danger of damage to the dura-mater, the brain substances, or the cranial sinuses; and less bone may be sacrificed. For simplicity, safety and readiness of employment it is a great improvement on the trephine in this class of cases.

Asepsis and refrigerants as prophylactics.—Experience has long since taught me that, except for the scalp tissues, all chemical solutions should be rigorously eschewed in all skull fractures involving an operation. My early experience soon taught me that any description of antiseptics when applied to the rude elements of bone anywhere, and to the dura-mater and cerebral tissue in particular, are full of danger to the vitality of the protoplasmic elements and may be promptly followed by grave inflammatory changes. Now, in my service, nothing is ever employed for flushing or cleansing in cranio-cephalic operations except sterilized water.

The ice-cap or iced-cloths are immediately applied to the whole exposed wall of the skull, and are continued until reaction is fully established.

It is my conviction that moist cold over a traumatized surface, is a potent prophylactic against consecutive inflammation, cellulitis or meningitis in all skull injuries, and should be always employed until about the third day, when it may be discontinued.

Mercury in meningitis.—Mercury judiciously administered is an agent of unrivalled excellence, in inflammatory conditions of the fibro-serous membranes. On the meninges, it acts with especial energy; therefore, in cases of cranial trauma, a purgative dose of calomel is given early, and repeated later, should symptoms of meningeal trouble threaten; the dose of the drug being so proportioned as to promptly secure its full therapeutic effect without its possible lethal action.

FRACTURES OF THE LIMBS.

Fractures of the extremities, we are almost never without in the Harlem Hospital service. In my own private hospital notes on this interesting and current type of truama, there are more than two thousand cases enumerated, though more than four thousand cases have come under my notice in the past twelve years. Since March first, this year, we have had entered of fractures of the extremities, ninety-one cases—seventy-six simple; and fifteen compound.

In the deluge of surgical literature spread before the medical profession since the doctine of antiseptics was established, it is singular to note that, except in the treatment of the compound variety, little has been presented on fractures of the extremities. In fact this study has been allowed to lapse. There is, however, no class of surgical injuries of greater interest than those fractures which involve the structures on which we depend for locomotion and prehension. Their correct treatment will reward us with a fair degree of restoration of contour and function; while when managed on wrong prin-

ciples, diminished power and motion are quite certain to follow.

The number here considered includes fractures of the clavicle, arm, forearm, leg, femur, and bones of the hand and foot.

Muscular relaxation rather than forced extension.—The guiding principles which we observe in small fractures, are, first to secure muscular relaxation and osseous reposition, without employing violence. Forced extension or counter-extension in certain fractures, are not wanting in theoretic support; but in fracture, a considerable experience, with careful observations, has convinced me that continued tension on a limb rather provokes muscular rigidity than effects relaxation. Besides, the co-existing pressure on the main blood-trunks and the tendency to sloughs in enforced confinements to bed, are among the drawbacks of steadily maintained tension. The rules of physics will not apply to fractured bones, otherwise such a thing as deformity after treatment would be impossible, except in the event of great loss of bone.

Muscular relaxation with support to the mangled tissue favors the falling of the fragments into their natural position. There they will remain, and restoration of contour will be the rule in many bones; but with the clavicle and humerus the incessant respiratory movement, and in the femur the demands of nature and the necessity of frequently shifting the body are disturbing influences which nothing can entirely overcome, and hence some sort of support is necessary.

Support of the fragments rather than fixation with gypsum.—When the plaster of Paris mould was first introduced it was at once seized on as the ideal material for fracture adjustment. It does serve most purposes when employed in appropriate cases; but everything is buried under it, and its removal is always attended with jarring of the limb. For a long time it has been my custom to employ it, never as a primary dressing, but after the provisional callus is formed, it answers a useful purpose.

In the treatment of compound fractures our first endeavor is to securely replace the fragments and close the wound—make the fracture a simple one.

In compound comminuted fractures, with immediate, partial or complete asphyxia or destruction of the tissues, our aim is to first suppress all hæmorrhage by closing separately the large bleeding vessels, thoroughly cleansing and dressing the wound, and placing the parts under covering in a comfortable position.

FRACTURE OF THE SKULL (10)

Vault (6) 3 compound. 3 simple.
Base (4) All simple.
Average age 32 years.
Survived { Vault 1 | Succumbed 5
{ Base 2 | " 2
Three were railroad injuries, 9 were males, and 1 female.

FRACTURE OF THE NASAL BONES (1)

Compound. Female. 36 years.

CLAVICLE (8)

Outer Third (7) 5 male, 2 female. Average age 19.
Middle Third (1) All simple.

RIBS (9)

5th rib (1) 6th rib (1) 8th rib (1) } All simple
9th rib (2) 7th rib (2) 10th rib (2) }

HUMERUS (13)

Surgical Neck (1) Simple.
Middle Third (6) 1 Compound.
Lower Third (2) 1 Compound.
Extern. Condyle (1) Simple.
Internal Condyle (3) Simple.

RADIUS (18)

Middle Third (2) 1 Compound.
Colles' Fracture (16) Simple. 9 female. 7 male.

ULNA (2)

Middle Third (2) Simple.

METACARPAL BONES (1)

Metacarpal bone of index finger.

PHALANGES OF HAND (6)

2d phalanx. Index and middle finger.
1st and second phalanges. Thumb.
1st and 2nd phalanges { Index and middle fingers. Compound fractures.
All phalanges of right hand. Compound.
2nd phalange. Ring finger. Simple. No amputation.
3rd phalange. Little finger. Traumatic amputation.

FEMUR (6)

Intracapsular (3) } Simple.
Middle Third (2) }
Supraconyloid (1) Compound. Railroad.

TIBIA (10)

Middle Third (7) 5 Compound.
Lower Third (3) 1 Traumatic amputation.

FIBULA (15)

Middle Third (7) 2 Compound. Simple.
Palb's fracture (8) All simple.

PATELLA (1) TARSAL BONES (1)

1 railroad case in which all the bones of the foot were ground into pulp.

METATARSAL BONES (3)

3rd metatarsal.
1st and 2nd metatarsal.
All metatarsal bones. Compound. (Railroad).

PHALANGES (OF FOOT)

1st and 2nd phalanges of 1st and 2nd toes. } Comp.
1st and 2nd phalanges of 4th and 5th toes. }
Little toe. Traumatic amputation.

PRIMARY AMPUTATIONS.

Primary amputation after disorganization of a limb, in civil life, is always a questionable procedure; though, when a limb has been practically traumatically amputated, we may, at once, with the scissors divide the frayed integument or tendons.

There have been in my service lately, eight amputations for traumatism and pathological conditions. After reaction, when the line of demarkation is formed in traumatic cases, we run little risk of a sloughing flap. Such a case is now under my care; a young man had his foot crushed off at the ankle joint, by a railroad accident. Four days later, after the line dividing the healthy from the dead tissue appeared, sufficient of the parts under the healthy skin were cut away to allow the healthy integument to fall in over the ends of the bones and cover them without strain.

CERVICAL TUMORS.

Ten cases of serious submaxillary cervical tumors have come under my care within the past three months.

One, a case of sarcoma of large size in an old man of sixty-four, was refused operation. It was not, apparently, deeply lodged; but as there were rapidly developing new growths in the hard-palate, pharynx and spheno-palatine fossa, it was decided that an operation was not warranted.

One tumor of large size was a lipoma, this sprang from the loose subscripital tissues and advanced forward and downward to dip under the posterior of the sterno-mastoid muscle.

Importance of accurate diagnosis.—One man on whom we operated, had a voluminous growth which occupied the whole quadrangle of the neck; on right side advancing up under the lower jaw, and downward behind the left clavicle, to and through the apex of the pleural cavity. He had been operated on four months previously; the growth reappearing consecutively, rapidly enlarging, and now, so far forward under the deep cervical fascia as to encroach on the tracheal rings and threaten suffocation.

At the institution in which he was first treated, radical operation was refused as the growth was declared malignant. The mass was hard, unyielding and painful, with deep attachments. After careful and thorough examination of his case, it was my conclusion that the mass was wholly tubercular, and that, while its removal would demand a very formidable operation, it was clearly within the range of operative surgery to turn it out safely. It was presumed that in the first operation the superficial absorbents were removed, and that the regrowth consisted in a hyperplasia with central degeneration of the deep chain, which lies in close contact with structures vital to life.

Hæmorrhage in operations on voluminous cervical tumors for their removal.—The most formidable danger in the complete removal of cervical neoplasms, comes from hæmorrhage; and there is nothing that so severely tries one's courage and skill as the occurrence of it in this class of cases. Celerity and coolness must be combined when an arterial spring is opened, or the operative field is suddenly flooded by the vascular torrent. In infilirating, malignant growths of the neck, removal always entails great danger because of a steady oozing which cannot always be wholly staunched before dangerous anæmia sets in.

In the above mentioned case, the operation of enucleation was commenced by dividing all the overlying structures in the centre, a cervical incision having extended across the entire mass. Great care was taken to clamp and ligate all the bleeding vessels as we preceded. The peripheral decortication was comparatively simple; but, as we penetrated into deep parts, difficulties began to appear.

Early in the operation the internal jugular vein was divided and both ends ligated. Next, as we proceeded more deeply to turn the growth out, consecutively, the cervicalis ascendens, the ascending thyroid, the transversalis coli, and the occipital arteries were clamped, ligated and divided. Of the nerves, the descendens noni, phrenic, and the anterior cervical branches of the cervical plexus were divided and their ends teased away from the elements of the tumor. The common carotid was adherent by its sheath from the clavicle up to the point of bifurcation. The sheath with the pulsating vessel was cautiously detached from the under surface of the growth, and now, while endeavoring to enucleate the deep supra clavicular lymphatics and press forward the subclavian artery, the pleural

cavity was opened just below where the subclavian arches upwards. Now the whole mass was lifted out, leaving a large chasm, exposing the tracheal plexus, the large blood-trunks and the trachea. The opened pleura was then closed, the bleeding subsided, and the edges of the integument were brought together.

In this case, although there was an extensive mutilation of tissue, but little blood had been lost. Our patient rallied well from the operation. His recovery was prompt; the line of incision closing by primary union, except at the part left for drainage. But little blood had been lost, and no shock followed.

The mass proved to consist of an aggregation of tubercular glands; some simply hypertrophied, others were suppurating and caseous; all were bound together by dense inelastic matting of fibro-connective tissue. Although the thyroid, submaxillary and sublingual glands were freely exposed, no trace of infiltration was visible.

Of the other seven cases two were malignant; two were acute supphrative inflammation of the lymphatics; of the remaining three two evidently were tubercular but not suppurating. These are being treated by palliative measures.

HERNIA—VARIOUS TYPES.

Sixteen cases of various types of hernia have come under my notice since the beginning of the present term—these included strangulated, incarcerated, reducible and irreducible cases. But one case required operation for strangulation. The operation was performed late at night, by a member of the House Staff.

Deaths in strangulation attributable to delay and to avoidable errors in operating.

This case, which terminated fatally, was most fruitful in suggestion and in pointing the way to avoid mistakes in treatment.

The case was neglected in the beginning, by the practitioner who was first called by persisting in violent taxis, and allowing his patient to suffer until collapse set in before sending for or calling in active surgical relief.

The next oversight was committed in the details of operation. A knuckle of intestine was partly twisted on itself; a patch of gangrene about the size of a quarter, extending through the glandular and muscular tunics, occupied the walls of the bowels—though there was no perforation, as the outer fibro-cellular coat was intact. Vomiting ceased after the constriction was relieved and the intestine returned, but the man did not react and sank thirty hours after operation. On autopsy, it was found that a fatal error had been committed in the management of the extruded coil. The adhesion which held the coiled bent surfaces of the intestine together, had not been liberated and, in consequence, its lumen remaining completely obstructed, internal strangulation followed, thus removing every possible hope of recovery. The gangrenous area, in my opinion, was not enough to seriously call for resection, the use of the Murphy anastomotic button or other adjustment, inasmuch as it is extended only about half way over the entire cylinder and would undoubtedly have taken care of itself by making an adhesion to some of the neighboring viscera, thereby preventing any possible leakage.

Critical inspection of the protruding mass and thorough liberation of all constrictions, both within the sac, the canal and at the internal ring, indispensable in all cases of operation for strangulation.—In all cases of operation for strangulation, after we have freely divided the points of stenotic impediment, it is of the greatest importance that we critically inspect the conditions of the ectopic viscera and completely liberate the imprisoned structures. A failure to do this renders an otherwise life-saving operation, inert in its effects. A practical demonstration of this came under my notice recently. A man was seized with symptoms of strangulation after stool. He had a chronic incarcerated inguinal epiplocele. An incision was made down in the upper surface of the mass, the omentum exposed and the inner ring divided. But there was no relief of the symptoms after operation and the patient sank unrelieved the following day. On autopsy a loop of intestine was found caught, crushed under and concealed by the omentum. This had entirely escaped detection and continued occluded after the epiplocele was exposed.

Treatment of reducible hernia.—Nine cases of reducible inguinal hernia have been examined by me, within the past ten weeks. My practice in this class of cases, is not to advise operation unless the hernia is progressively enlarging, is painful,

threatens strangulation, is not trussable, or the patient is desirous of relief from the deformity. Besides the class enumerated, it is my custom to recommend a radical cure in a female, or in those individuals whose deformity constitutes an impediment to entrance into the civil or military service. But one of these nine which came to me was regarded as appropriate for radical cure. He was a young man who had hernia since childhood. It was of the indirect inguinal type. This was operated on with gratifying results, the patient leaving the hospital in two weeks.

O'Hara's or the Australian operation the the best for open treatment.—Of the almost infinite number of operations recommended during the past ten years for cure of hernia, there is none which in so large a measure fulfills the requirements with so little mutilation, as the operation devised by Mr. Henry M. O'Hara of Melborne, Australia. Briefly described, it consists in an isolation of the neck of the sac, its division and retraction up through the canal and internal ring to the fascia transversalis, where it is anchored by absorbable suture material. It entalis no weakening of the abdominal walls by divisions of the aponeurosis, no divisions of large vessels, there is no drainage required, and no disfiguring scars left. In fifteen cases so treated by me since April, 1894, there have been no relapses.

ABDOMINAL SURGERY.

Without doubt in the whole field of medical science and since its earliest dawn, there has never been anything to equal the stupendous progress made in *abdominal and pelvic* surgery during the past twenty years, and in this, let medical history record it, America has occupied the position of the pioneer. In 1881 the celebrated Simms gave to the professional world his conceptions on the possibilities of surgery in this direction, though unhappily he did not survive to realize the fruition of his hopes. Bigelow had perfected lithol·osity. At the International Medical Congress in Washington, in 1886, Nicholas Senn presented his thesis on the surgery of the intestine, and startled the rank and file of the profession by the immensity of his original and marvellous researches and experimentation on abdominal surgery in the lower animal, and his lucid demonstration of their application on man. Abbe had been a generous contributor in this line, and posterity is indebted to Sands for opening the way to that operation on the appendix, since perfected by McBurney, and through which thousands of lives have been saved. It has rendered necessary the re-writing of the pathology of the peritoneum. As would seem the climax of all, the young Chicago surgeon, Murphy, has invented an anastomotic button, the very acme of human ingenuity, which has rendered the surgery of the intestine more expedient and safer than ever.

Timeliness and skill in operations on the appendix.—During one week, from April 5 to 13, in this year, seven cases of severe abdominal disease came under my notice. Six were of appendicitis; four were of the perforating type. Two came into the hospital in the advanced stages, too late for relief by operation, and both died within twenty-four hours after entrance. Two were operated on; with perforation of the appendix in both cases. In one there was a double perforation with general peritonitis. Both recovered. Two mild cases of the recurrent type were treated by palliative measures and recovered. In one abdominal case which was brought into the hospital, great prostration was present. My colleague, Dr. A. Palmer Dudley was of the opinion that there was mechanical obstruction, though it was my impression that it was the appendix which was at fault, and that obstruction was due to intestinal paresis. The abdomen was so extremely tympanitic that it was impossible to definitely locate the structures. On section the appendix was found healthy and, as Dr. Dudley had predicted, the small intestine was found obstructed by a band at about its center. The patient rapidly sank under ether, before the incision could be closed.

It was formerly my conviction that, as the danger in the operation itself seemed to me very great and the larger part of those cases of appendicitis do well under medical treatment alone, surgical interference was not proper in any except rare instances. Later experience has convinced me that this position is not tenable and that in all cases of appendicitis which show a tendency to persistently recur, or or are of the acute fulminant type, the correct course is prompt operation. The

results in operation depend almost entirely on operating just at the right time and performing the operation with skill and celerity. The time to operate is, and always probable will be, very difficult to determine. Its performance, for a successful issue in a large number, requires special skill and experience. A small incision, the quick ferreting out of the appendix under the trained finger, the neat and aseptic amputation of it, without unnecessary loss of time or trauma of the peritoneum count vastly in the patient's favor.

On the 28th of April Dr. J. A. Hoffheimer called me in consultation to see a case of appendicitis under his charge with the view of determining the propriety of an operation.

The patient was a boy of twelve, who had had previous attacks. It was the sixth day of his illness, when I saw the case. At this time, his pulse was 143 per minute; the temperature 103°; there was some vomiting, and severe pain when morphine was not pressed. The abdomen was extremely tympanitic, and over the appendix sensation to pain on pressure was extremely acute, though all the abdominal areas were hyperæsthetic.

After a careful examination of the case, giving due weight to the various serious symptoms present, the lad's grave condition, and the uncertainty of results after radical measures, when the advanced stage of the disease is reached, my opinion was that nothing definitely could be promised by operation, and it was possible that recovery might ensue by energetical constitutional measures. Three days later the boy died just at a time when it seemed that peritoneal inflammation had subsided. Now my regret is that I did not operate. Indeed, there can be scarcely a question but in all these cases, no matter what the stages of inflammation may be, when we are once assured that the appendix is the actual seat of serious disease, an immediate operation should be invariably insisted on.

JOINT DISEASES.

The influence of systemic cachexia on the arthopathies which succeed injuries.—Several cases illustrating the various phases of joint *injuries* and *diseases* have lately come into the hospital for treatment. The dominating patholigical changes attending these were rheumatism and tuberculosis. There can be scarcely a doubt but various constitutional disturbances impress their stamp on many traumatisms and enhance the vulnerability of various organs and structures. This is especially true of the tissues which enter into the joints.

The articular heads of the bones are the center of great activity during the processes of growth and development. As a move in the direction of arriving at an accurate knowledge of the precise pathological conditions which obtain in certain arthritic elements, it would be well if the terms "hip-joint disease" or "knee-joint disease" were abolished.

A young man, late in the autumn of 1894, sustained a sprain of the knee, in a foot ball game. He was treated at home and elsewhere for "knee-joint disease." Failing to secure relief from the various fixation appliances which had been employed, he entered Harlem Hospital on the 12th of March. On a critical examination of the joint there was no evidence of any morbid changes in the capsules or cartilages; but the head of his tibia was enlarged and exquisitively sensitive. The cancellous center of this bone was opened freely; the trephine entering just under the insertion of the tendon of the sartorious. A pus cavity was tapped and a considerable residue of necrosed bone curetted out. All pain immediately ceased, the spasmodic contraction of the hamstrings passed off. He returned within four weeks to his trade of a painter when his "knee-joint disease" (?) was cured.

A young man entered later, who a few days before had violently wrenched his knee. He was sent in to have the supposed hæmorrhagic distension of the capsule relieved by evacuatien through an arthotomy.

It was found to consist entirely of a hæmatoma into the loose cellular tissue outside the aponeurotic investment of the knee joint, and wholly disappeared by a few days' rest with moderate bandage pressure.

A young woman of good physique was sent into the hospital for the treatment of "acute suppurative synovitis of the right knee joint." On inspection it was found that the patella was displaced inward and deeply lodged under the projecting surface coming down from above. The case

was clearly one of acute phlegmon under the fascia-lata, its fluid contents being arrested from advancing further downward by the insertion of its fibrous hood into the lateral surfaces of the quadriceps tendon. The articulation had wholly escaped. An incision, evacuation and drainage gave immediate relief, and final recovery was rapid.

Rheumatic pain sometimes antecedent to trauma of the joints.—Rheumatic affections of the joints of the lower extremities are sometimes preceded by a weakening of the muscles. This precedes the intense pain and swelling. The person about to be seized is conscious of a sense of lameness or unsteadiness in the articulation. He is now liable to a fall or a wrench, when, all of a sudden, all the typical symptoms of acute inflammatiou set in, and he has a pan-arthritis. To mistake this mixed condition for a joint trauma alone, and concentrate all one's attention on the local trouble, may lead to serious results. Protracted fixation of a limb always interferes with its full nutrition and arrests its growth in growing children.

Several cases have been seen by me during the spring months, supposed to be organic disease of the joints which promptly recovered when all retaining supports were removed, the joints allowed full liberty and rheumatic remedies pressed.

Resection of diseased joints or conservative methods.—Formal resection of a joint is never done in my service unless there is evidence that disease has completely disorganized it. In those cases it remains a question if an amputation is not preferable. Resection of a joint, let it be remembered, means its entire destruction. In the child, under ordinary surroundings, after a time tubercular disease of the heads of bone often tends to spontaneous arrest. My practice in aggravated cases of this type is to open and curette the joint, preserving the ligament and cartilages. In adult tuberculosis of bone, reaction will not arrest the progress of the malady which is now, usually generalized and progressive.

MAMMARY TUMORS.

Among the cases seen and treated by me within the past quarter, were five cases of tumor of the mammary gland. Three of them were malignant, of the epithelial variety, one recurrent. Of the other two, one was a dermoid cyst and the other tubercular.

The therapy of malignant mammary neoplasms—The cyst was readily decorticated, the incision promptly healing. Seven years before she had the opposite breast removed for the same condition, in which up to the present time there had been no recurrence. An incision, curettage and drainage cleared away the strumous infiltrate.

The principles which should govern us in the management of cancer of the breast are still *sub judice*; indefinite and unsettled, although the reports coming in from the results of the extirpation of all the axilliary absorbents with the complete removal of the mammary glands, point to a great improvement of this method above all others.

One of these cases was treated by me on this plan for the reason that there was already an immense secondary growth in the axilla. In her case, there was a large, hard infiltrating, secondary growth in the axillary hollow, which required a very delicate dissection to remove it without damage to the main arterial trunk, to which the tumor maintained a firm grip.

The long thoracic artery with the thoracic alaris were divided and the axillary vein opened. But, all hemorrhage was readily subdued. The patient ultimately made a good recovery, though with marked limitation of shoulder action, in consequence of the cicatricial contraction in the apex of the axillary space. The direction of dissemination is always centripetal along the course of the absorbent vessels. The adenomatous structures of the lymphatics, serve as out posts to prevent systemic infection, and no doubt are invaded at an early date. The complete operation is one which entails an extensive multilation of tissue and is, perhaps, more dangerous to life than simple mammary excision; but the promise which it gives us against relapse more than outweighs these objections.

One patient with a small, hard scirrhus refused operation and later I was informed went into the hands of a charlatan.

A case of recurrent cancer had been first operated on by me in November, 1884, and again six months later. She had refused any further cutting operation.

In her case the powerful chemical cauteries have been employed by me, with the

hope of being able to clear away the fungating crop of pulpy granulations which occupied the site of the scar tissue. It succeeded fairly well, at first, but its repetition, in an attempt to destroy the substrata of neoplastic elements, was attended by such agonizing pain and positive shock that life was endangered and my patient declared she would rather die than undergo the ordeal again.

When arsenical paste was employed, although its activity in charring the tissues was decided, yet there were invariably symptoms of constitutional poisoning; numbness of the extremities, from toxic neuritis, nephritic irritation, sore throat, and very severe gastric symptoms, followed in every instance.

My own unsatisfactory experience with caustics has led me to employ them in malignant growths with caution, and never except on those which occupy the periphery and are of a very limited area. In labial epithelioma or on senile growth involving the nose or eyelids, the caustic substance will serve a most useful purpose.

SPINAL IRRITATION.

W. H. WALLING, M.D., PHILADELPHIA, PA.

Spinal irritation is generally characterized by tender spots along the spine, more or less pain in the back and down the limbs, with weakness in the limbs, this latter being in some cases very pronounced. Pain is frequently felt in the stomach, and the patient may seek advice for some supposed malady in that organ, being unaware of its spinal origin.

The painful or tender points along the spine in many cases are very easily found upon pressure, but in others the trouble is obscure, and the difficulty is only located upon electrical examination. The technique of such procedure is as follows: The patient removes the outer clothing except from the lower limbs; is covered with a sheet, if a female, and then seated upon a wet sponge or pad, connected with the positive pole of a faradic battery. The operator, with the negative sponge, using a current of just sufficient intensity to be plainly felt, commences at the nape of the neck and passes slowly down upon each side of the spine, carefully noting the sensations produced. Over the tender points, pain will be felt. This will frequently be found to extend across the whole lumbar region, sometimes involving the sciatic nerves. It must in some cases extend around the sides from the lower cervical and the upper dorsal portion, more often upon the left. Again it will appear only at or near the median line. This accounts for the pain in the region of the stomach, above referred to.

In males, I find the difficulty mostly confined to the lumbar region, and such cases are sexually impotent, as a rule.

The cause of the disease is sometimes obscure. Many cases that have come under my observation have resulted from an attack of the grippe. Others were due to over-exertion, or prolonged standing, as in shop girls. Others to the jar of the street cars, combined with long standing, as in conductors and motormen, or gripmen. Some are traceable to traumatism; still others possibly to some specific taint.

In some patients the tendon reflex is abolished, in others I have found it exaggerated. In the former class, strychnia agreed with the patients; in the latter, it aggravated the symptoms in some cases.

The treatment consists in removing the cause if possible; rest, counter-irritation, electricity, and proper medication. As a counter-irritant tincture of iodine and glycerine, equal parts, makes a good application. Paint on thoroughly for fully ten minutes. If tincture of iodine be used ullfstrength, as may be necessary in some cases, it too should be applied freely, and then allow the skin to heal before applying again.

Proper electrical treatment is very valuable, and in order to give such treatment, a good battery and intelligent application must be combined. I use a Kidder faradic, and for the most soothing effect, the whole coil, *i. e.*, the current selector rests upon the "A" and "E" posts, with the tin

tube covering the coil, completely removed, the current being governed by a controller. The technique is as follows: Seat the patient as for diagnosis, with the negative pad on the stool, then with the anode, or positive pad, at the nape of the neck, turn on just sufficient current to be plainly felt, and pass gently down the spine, resting for several minutes over each tender point. A large pad is sometimes preferable for use on the spine, especially if there be much tenderness, as more current can be thus used. Pass up and down the spine and around the sides, for twenty minutes to half an hour, repeating daily or every other day, as may be needed. We get better effect by using the uncovered coil, as above directed, than if only part of it is in the circuit.

In many of these cases the brain is involved and must receive attention. At the close of the sitting, change to the galvanic battery. The patient may complain of being dizzy at times. If this be from plethora, place the cathode on the left temple and the anode back of the right ear. Turn on one or two m.a. of current, hold the pads as adjusted for one or two minutes, then carefully move cathode to the right temple and the anode to back of the left ear, continue as before, and finally bring the cathode to back of the contact with the skin. Now increase the right ear without at any time breaking current to three or more m.a. if the patient can bear it, and use this for two or three minutes. If at any time during the sitting, the patient should complain of being dizzy, reduce the current to a pleasant tolerance. Always turn the current on and off very gently.

When there is an anemic condition of the brain, proceed in the same manner but with the poles *reversed*.

Medication.—This will include, of course, diet and hygiene, as well as drugs. The first two must be regulated according to the case. As to medicine, I have had the best results from the use of the tri-bromide of gold, and the oxy-bromide of arsenic.

If the trouble is of specific origin I use the combination of the tri-bromide of gold, with the oxy-bromides of arsenic and mercury. This latter preparation is a specific for all conditions arising from syphilis.

Gold and arsenic are powerful alteratives and reconstructives. They have a most wonderful effect in all sclerotic conditions, promote healthy metabolism, and prevent decay. I now have on hand two cases of chronic spinal irritation, which are rapidly yielding to the gold and arsenic treatment.

This combination also acts as an aphrodisiac, giving in many cases most satisfactory results. For further information regarding the tri and oxy-bromids, the reader is referred to an article by the writer in THE MEDICAL AND SURGICAL REPORTER, January 26, 1895. I shall cheerfully answer inquiries from any reader of the REPORTER regarding these remedies.

Restoring Persons Apparently Dead from Chloroform.

Leedham-Green (*Birminghan Medical Review*) calls attention to the König-Mass system of rapid compression of the precordium as used in Göttingen. The case on which he tried it was a child four months old. The operation of circumcision had nearly been completed when the child became deadly pale, the pupils dilated, and the respiration and the heart's action ceased.

The child was apparently dead. The surface became pale and cold, the eyes shrunken, pupils widely dilated, and there was a collection of froth at the mouth. Rapid compression (about 120 per minute) of the precordium was followed by a faint gasp and ultimate recovery. Seven minutes had elapsed during which neither heart-beat nor respiratory effort could be detected. Sylvester's method which was first used, was totally inadequate.

Laparotomy for Perforation in Typhoid Fever.

Parkin (*British Medical Journal*) gives the history of a case in which the perforation was promptly diagnosed and operated on only two hours after it had occurred. The patient died three days after the operation. The author states that this added one more to the list of twenty such cases which had been so treated with only one recovery. There is no doubt that perforation in the course of enteric fever is almost invariably fatal, and any recovery from such a complication can only be regarded in the light of an accident unless surgicial treatment be adopted.

THE MANAGEMENT OF THE NEW-BORN.*

T. H. MARABLE, M.D., CLARKSVILLE, TENN.

My subject deals with the infant from its first arrival into this world of care, whether it greets you in that boisterous way which is familiar to every practitioner, accompanied by the subdued words of the mother, "Thank the Lord!" or whether it comes silently into existence. After having satisfied myself as to the viability of the child, I tie the cord in two places; first about three-forths of an inch from the child, and, leaving a few inches interspace, I again ligate. Having severed the cord between the two ligatures, the child is laid in a warmed flannel, wrapped up and put aside.

If it be still-born, or a weak, delicate, poorly-nourished child, I, by stripping between my fingers, force the blood from the cord into the child and tie; if cyanotic, I allow the cord to bleed before tying. I have frequently resuscitated in this way. If these methods fail, I resort to shock by plunging first in hot, then cold water. If this does not resuscitate, I allow the child to remain for ten minutes in the hot bath and use Sylvester's method, allowing the neck to rest on the rim of the bowl, using my foot as a head rest and to prevent the head from falling back too far. This extends the neck and the head is thrown back. Then with the Sylvester method of inflating and expelling air into and from the lungs, I continue my resuscitating process. If after continuing in this position for ten or twenty minutes, the child does not breathe or cry, I plunge it into the cold bath and continue as before, but I do not allow the child to stay in the cold water more than five or six minutes. I continue alternating as above for two hours, if the child does not resuscitate. I have not infrequently continued this method of resuscitation for an hour and a half before being rewarded with a cry

Having gotten the child to cry and breathe regularly, I wrap it in warm flannel and lay it away for some hours if very feeble.

Washing and dressing the child I always delegate to some female, but have it done under my supervision. I have some clean warm water gotten; then having had the child anointed thoroughly with vaseline, sweet oil, or more commonly lard, to facilitate the removal of the vernix caseosa, I have the nurse proceed to wash it, using as an applicator a sponge or soft cotton cloth, using, preferably, castille soap in the water. Care is taken to clean the folds and joint flexures. If, as is occasionally the case, the vernix caseosa can not be removed without too tedious handling or if the child is feeble, I have it wiped dry and again anointed. I find it can be cleaned very easily at the next bathing.

The child being now ready to clothe, I dress the cord in the following manner: The stump, being from three-fourths to one inch long and tied as I invariably do it, I turn up on the abdomen after having wrapped it in absorbent cotton. I fasten it in this position with a piece of surgeon's plaster one inch wide by six inches long, which I place across the abdomen to hold the navel stump in place. I allow this to remain for four or five days, when, with a folded piece of cloth previously wet in warm water and laid on the plaster for ten or twenty minutes, the plaster can be easily removed. I prefer this method of dressing the navel to the bandage with linen and grease, so frequently used, for the following reasons: The dry dressing tends to mummify the cord and there is seldom any odor during the dropping off of the cord; the plaster does not slip nor need constant attention as does the bandage; it is more easily put on, it is more cleanly, and the child is less liable to take cold on removing it.

Having finished dressing the child, it is immediately put to the breast. This is done as a safe-guard to the mother. Should the secretions found in the breast at this time be not sufficient to satisfy the child, I do *not* allow the nurse to give it a sugar-teat or fat meat, having noticed long since in my practice that this produced what is commonly known as "three months colic,"

*Read before the Tennessee State Medical Society, April, 1895.

which is nothing more or less than dyspepsia. My parting injunction to the nurse is, "Do not give the baby a sugar-teat nor fat meat." In case the child is not quiet and does not sleep as is usual, I instruct the nurse to give catnip tea with a small amount of whiskey in it. I have found from experience that this will satisfy the hunger and cause the kidneys and bowels to act. It is also a very fine antispasmodic. This is kept up from three to six days, at which time the mother's milk usually appears. Should the mother not give sufficient milk, or fail entirely, as is sometimes the case, or if I have what is to me the most inhuman of all human beings, the fashionable mother who does not want to nurse her own child because "she has not the time to stay with it, and besides it makes her grow old faster if she nurses it;" (such a mother should not be tolerated in good society, for there is nothing that suits the baby like the mother's milk), experience has taught me there is no one kind of food you can give these unfortunate babies—for they are unfortunate, either from a perversion of nature or perversion of motherly instinct, they never know a mother's love. The next best substitute is the wet nurse, provided you can get a healthy one and the ages of the children are nearly the same. This not being an easy matter, I usually first try cow's milk fixed in the following manner: Cow's milk one part, water (previously boiled) three parts, to which is added a small amount of sugar of milk, and one-half teaspoonful of lime water to the ounce of milk diluted as above. I feed this to the child, an ounce every two hours, gradually increasing until by the end of the first month the child is taking two ounces and the intervals of feeding have been increased to two and a-half or three hours. The amount of milk is now increased, each month an ounce, up to the sixth month, and the intervals lengthened to four hours. If warm weather, the child is bathed in tepid water daily, the clothing is light and loose fitting. I do not allow any tight bands; they interfere with the circulation and respiration of the child.

But with all care for minor details, I have not infrequently had to change the food a number of times before finding a food suitable for the child. I recall a case which came under my care last summer. I tried everything, cow's milk, goat's milk, sterilized milk, condensed milk, Horlic's malted milk, Nestles food, Imperial Granum, and, lastly, I put the child on Mellin's food, when it began improving and continued to do so until it was in perfect health in about six weeks. The mother put him back on sterilized milk, saying she had the cow and the sterilizing outfit. From this time the child was continued on sterilized milk, though occasionally it would disagree with him. Then the mother, under my direction, would return to the Mellin's food and the digestion would again right itself. Other cases have come under my care in which I did not get any benefit from the use of Mellin's food. In fact I have most frequently gotten benefit from the condensed milk. I use Reed & Carnrick's brand; have found it agrees better than the brands ordinarily sold at the grocery; being put up for infant feeding, the milk is better selected and the cows from which the milk is taken are more carefully looked after in their water supply and food.

An important principle in the clothing of infants is to apply the garments so loosely that while they protect from the cold and secure the necessary warmth, they do not restrain the functional activity of the organs underneath. This was my chief reason for quitting the use of the belly band; the irregularity with which it is put on by the nurse, the changing it each day, or whenever it became soiled, and after a few weeks or months it is generally left off, endangering the child with cold.

I never use the nursing bottle with rubber and glass tube attachment, on account of the difficulty in keeping them clean and sweet. I use the plain rubber nipple, and when once used I direct the nurse to turn it inside out and put it in soda water. The bottle is also thoroughly cleaned and aired before using a second time. If these rules are followed strictly, my word for it, there will be a great deal less suffering among the artificially fed or bottle-raised babies.

A recent London *Lancet* has interesting allusions to the "successful use of electricity in trigeminal neuralgia and to long-continued treatment of tic douloureux (which is practically the same thing), with long and short applications of the current. Success is uniform in all cases."

THE DAMAGE SUIT.*

DUNCAN EVE, A.M., M.D., NASHVILLE, TENN.

The duty has been assigned me of preparing a paper on "The Damage Suit." It seems, therefore, indispensably necessary that the subject should be defined. You will be surprised to find that neither medical nor legal dictionaries attempt a formal definition of malpractice. I must, therefore, content myself with quoting a well-known authority on medical jurisprudence, which defines medical malpractice to be: "The unskillful or negligent treatment of a patient by a physician or surgeon, or some one undertaking to act as such, resulting in an injury to the patient."

Hence it will be seen that in order to maintain a suit for malpractice two things must appear, viz.: Unskillfulness or negligence in the treatment of the patient, and the injury to the patient.

The question therefore arises, how much skill is required? The answer to this is, ordinary skill; and ordinary skill is defined to be such skill as is usually possessed by members of the profession at the time and place when and where the individual is practicing. Extraordinary skill is not required unless the party expressly contracts for such a degree of skill. The law allows such a contract and will hold the party to it, if made. But the "code of ethics" forbids such contracts.

The impression seems to prevail that a physician or surgeon is held to a higher degree of skill than members of other vocations. Such is not the case. No doubt this erroneous impression frequently causes suits for malpractice to be instituted, and the sooner this impression is removed the better. The degree of diligence is simply such care and attention as the nature of the case demands. In illustration of this fact, Elwell states that the degree of care and attention which would be required in a case of iritis is very different from what would be necessary in a case of chronic rheumatism.

When a doctor is sued and charged with unskillfulness he has the right to prove that he is a graduate from a reputable medical school, and also to prove his reputation for skill by his professional brethren. He also has the right to prove his treatment of the patient in the case being tried, and ask the opinion of members of the profession as to what degree it was skillful or otherwise; to show the care and attention given the patient, and to take the opinion of the members of the profession as to whether the same was reasonable or not.

A physician or surgeon is not to be judged by the result. He is not an insurer, and is only held to exercise reasonable skill, care and attention in the treatment of his patient. In case of doubt as to which would be the better treatment or operation or dressing, etc., he is simply required to use his best judgment.

The patient is required to co-operate with the attending physician or surgeon, and to follow his directions, and if he fails to do so, the physician or surgeon is not to be held responsible for the injuries resulting from such failure, whether the same be from disinclination or the pain of the patient. In either event it is the misfortune of the patient and not the fault of the doctor.

From a well-known medico-legal work we find the following rules have been thoroughly established:

1. A physician or surgeon, without a special contract for that purpose, is never considered as warranting a cure.

2. His contract, as implied in law, is: (*a.*) He must possess a reasonable degree of learning, skill and experience, which is ordinarily possessed by others around him, in his profession. (*b.*) That he will use reasonable and ordinary care and diligence in the treatment of the case committed to him. (*c.*) That he will use his best judgment in all cases of doubt as to the best course of treatment.

3. He is not responsible for want of success, unless it is proved to result from want of ordinary skill, or from want of ordinary care and attention.

* Read before the Tennessee State Medical Society, April, 1895.

4. He is not presumed to engage for extraordinary skill, or for extraordinary care and attention.

5. He is not responsible for errors of judgment, or mere mistakes in matters of doubt and uncertainty.

You will doubtless infer that I have some familiarity with questions arising in suits for malpractice, and I admit that I have had experience on the subject. I have been sued several times and yet never compromised or lost a single case.

Elwell declares that nine-tenths of all the cases of malpractice that are brought before the courts for adjudication, arise either from amputations, fractures or dislocations.

This is from the fact that members of the legal profession fail to acquaint themselves with the difficulties and even probabilities which the surgeon must encounter. They do not know that in many fractures and dislocations, shortening and deformity are the rule.

Professor Austin Flint, Sr., abandoned the practice of surgery and confined himself exclusively to the practice of medicine because of the danger arising from damage suits. It does really seem that the safest course for a surgeon to pursue—not knowing what a jury might do—is to make over his property to his family.

One cause of suits against the members of our profession is the enmity, jealousy and rivalry that unfortunately exists among them. Too often is it the case, that a doctor is the one, that in some way, is responsible for the litigation.

Our profession is justly distinguished for its charity, and the gratuitous service it renders the poor, yet strange as it may appear, more suits are brought by pauper patients for damages for alleged malpractice than all other classes combined; and, according to my experience, they are the most critical, the most suspicious and the least grateful of patients.

I venture here to relate a case that occurred with my father:

During his sojourn in Augusta, Ga., he had an infirmary for the treatment of slaves, when a wealthy planter sent to his institution a negro upon whom it became necessary to amputate the thigh. Sometime afterward the slave died, and the owner brought suit against my father, for his worth as a slave. This suit was brought by the Hon. Alexander H. Stephens. My father employed the Hon. Eli Cummings, ex-Governor of Georgia, and obtained the depositions of the noted surgeons Valentine Mott, Samuel D. Gross and Eli Geddings. After the reading of these depositions, the testimony was so overwhelmingly in favor of the defendant that the Hon. Alexander H. Stephens got up in court and dismissed the case at the plaintiff's cost.

The interesting features in this suit are: First, my father claimed to have made more reputation in the case than any other thing which up to that time had happened him; and, secondly, the strange occurrence of the gentlemen connected with the case, viz., that the Hon. Alexander H. Stephens, my father, and ex-Governor Cummings—all graduated in the same class from the University of Georgia, taking the first, second and third honors.

Let the medical profession act in harmony, let jealousies and rivalries be repressed, let them stand shoulder to shoulder in supporting and maintaining honorable medicine.

Let them down quackery and empiricism, let them rebuke the ignorant pretender and bring to justice the presumptuous charlatan, at the same time that they resist the unjust attacks that are so often made upon the meritorious members of the profession. Whenever one of these suffers wrong the reflex action is injustice to all.

Let us all remember that "united we stand, divided we fall." In union there is strength, and if the profession as one body were to unite for the purpose of preventing injustice being done its members by vexatious and oppressive damage suits, brought for the purpose of speculation by worthless and unscrupulous parties, the beneficial effect of such action would not only be immediate but permanent.

I, therefore, urge every physician and surgeon to make active and cordial exertions in this behalf, not only for his own security, but also for the safety of his brethren and for the welfare of the entire profession.

How to Abort Syphilis.

Feremal (*Annal de Lyon*) claims that Bichloride of Mercury (grs. xii to ℥i —) painted on a chancre as soon as it appears, kills all specific germs, and there will be no systemic manifestations. The local sore then to be treated on general principles.

CHLOROFORM ANESTHESIA.*

C. HOLTZCLAW, M.D., CHATTANOOGA, TENN.

When in the history of civilization, mankind had become physically degenerated; when the nervous organization increased so that the sensitive nerves could no longer endure pain, there came a universal urgent demand for something that would produce insensibility without destroying life. It was left to America to discover and grant this grand boon to suffering humanity.

It is unpleasant to know that there were three men who claimed this discovery and entered into a disagreeable and unfortunate controversy concerning it.

Without entering into the merits of the case, I take pleasure in saying that I have had the honor to see two of the greatest men in the medical world; whose names will be handed down to posterity; two of America's sons; Marion Sims, who revolutionized the treatment of diseases of women, and Crawford Long, who discovered anesthesia. Pardon these preliminary remarks, as they are only intended to excite your attention to some practical points on the subject of anesthesia by chloroform.

This agent was introduced about a year after ether, by J. Y. Simpson of Edinburg. It is needless to state that statistics show that chloroform is more dangerous than ether. The figures for the last four years, from carefully collected reports, show the alarming result that of 166,812 chloroform cases there were 63 deaths; a ratio of 1 to 2,647. Of 26,320 ether cases there were only two deaths; a ratio of 1 to 13,160. It has also been shown that about the same results have obtained for the last forty years.

Still in spite of the published results; in spite of the trade made by the writers; physicians continue to administer and patients to demand the administration of chloroform rather than ether. Why is this? Why the persistence in the use of this dangerous and baneful drug? The reasons are several. It is more pleasant to the patient; it is more easily administered; a less quantity is necessary; it is cheaper; less time is consumed; and there are left no bad after-effects, such as nausea, vomiting, bronchitis or nephritis. In the statistics to which reference has been made, the deaths that occurred were sudden and immediate. These were reported and registered. Deaths, from the subsequent effects of ether, such as nephritis, peumonitis and bronchitis are not reported.

It is my honest belief that as many or more deaths occur from these causes than from the immediate effect of chloroform. In 14 years experience, I have anesthetized, or had it done under my supervision, nearly 3,000 cases by chloroform, and without a death. During the same time I had 150 or 200 cases of ether narcosis followed by three deaths in from 1 to 3 weeks; one of which was from nephritic, and two from pulmonary complications induced by the ether.

I am satisfied that if the statistics would be carefuly collected of deaths occurring from subsequent effects of ether, there would be found more than from chloroform.

It is to the prevention of these sudden deaths that I desire to call your attention. They can be prevented to a very great extent, for they are almost invariably caused by ignorance or carelessness.

What is the cause of this sudden death? Investigators have shown that the prime cause is anemia of the brain affecting throat or lungs.

The results of the Hyderabad Commission show that it is from effect on the respiratory function and not on the heart action; that it is only necessary to watch the respiration and not keep the finger on the "deadly pulse;" and that so long as the breathing is normal there is nothing to fear from heart failure. In eight cases out of ten I think this idea is correct. But I think it well enough to watch both carefully and stimulate the one which should flag.

It has been my observation that chloroform is much better borne in warm cli-

*Read before the Tennessee State Medical Society, April, 1895.

mates than in cold. Why this is true I am unable to state. Excessive meat diet is claimed by some observers to render chloroform more dangerous. These are, however, only general considerations.

In the preliminary preparations to be observed where possible, always direct that the bowel be moved freely during the twenty-four hours before the contemplated operation, and that a light diet of soup or milk be allowed. No food should be taken for six hours immediately previous. There is a prevailing opinion that heart disease, or supposed heart-disease is a contraindiction to chloroform. This has been ably refuted by Dr. Fisher Clarke of Stockton, Cal., in an article in the *Medical Record*, April '94.

The administrator should endeavor to allay any nervous fears by examination of the heart for the moral effect if nothing more, and to quiet the mind of the patient by assurance, in a gentle voice and kind words, that there is no danger.

Fright has undoubtedly a weakening effect on the heart. Always give strychnia, sparteine or morphia with atropia, hypodermically, fifteen minutes before the operation.

See that the clothing is loose and open so that the respiratory movements of the chest and abdomen can be observed.

A perfectly prone decubitus is necessary. Never administer chloroform unless this can be obtained.

Death sometimes occurs with the first few inhalations, before any general anesthesia has commenced. Rosenberg, in an address to the Medical Society of Berlin, November 28, '94, showed that he had demonstrated that such death occurred, "through the effect on heart or lungs, due to reflex irritation originating in the nasal mucous membrane and transmitted to the nerves having a paralyzant action on heart and respiration." He also claimed that by "anesthethizing the mucous membrane of the nose with a four per cent. solution of cocaine, these reflex disturbances are prevented, and in view of the fact that cocaine is an antidote to chloroform, it absorption will in another way obviate its injurious effect."

This is certainly a very plausible idea. But in view of the fact that sudden death has been caused by spraying cocaine in the nasal mucous membrane, I have used and suggest the practice, in order to obviate both these dangers, of instructing the patient to breathe through the mouth instead to through the nose. With this method there is less coughing, strangling, and resistance, and less danger of syncope on the part of the patient.

The method of administration is a very important consideration. The paper cone stuffed with cotton or cloth is to be positively interdicted as being exceedingly dangerous. The ordinary towel, handkerchief or napkin is better, but presents a too concentrated vapor and is liable to excoriate whatever skin it touches. The various new inhalers are cumbersome, expensive and impracticable. The best inhaler is that introduced by Esmarch. Several varieties are sold by the instrument dealers, one of which I present to your notice. Another involving this principle, which I also show, can be bought at any general store for a dime. It is, as you see, an ordinary concavo-convex or hemispherical fruit-strainer or seive, made of woven wire and covered with yarn stocking cloth, and is attached to a handle. By this method it has been shown that, even with complete saturation of the cloth, the patient inhales only a twenty to forty per cent. dilution of the vapor, which is much less dangerous than one more concentrated. The face is to be covered by the inhaler, on which, in the beginning, only a few drops must be poured. Any coughing, any indication of spasm of the glottis, or any undue resistance on the part of the patient, necessitates the temporary removal of the inhaler. When this shall have ceased, commence again slowly, gradually increasing the supply, but with as much uniformity as possible by what is known as the "drop method." This method is best obtained by a drop-bottle suggested by myself, a specimen of which I take pleasure in presenting.

It consists practically of a ground-glass-stoppered bottle on the rim of which a small lip is blown. From this lip there extends a small groove downward about one-half the length of the neck. On the opposite side, about the middle of the neck, there is a small hole for the admission of air. In the ground-glass stopper, there are two grooves on opposite sides, extending one-half the length of the stopper. When in use the stopper is turned so that the grooves come in apposition with the air hole on one side and the groove in the

neck on the other. This adjustment can be so regulated as to permit a stream or only a drop to flow. When not in use, the stopper can be turned one-half way round, removing the grooves from the air hole on one side and the groove in the neck on the other, thus effectually closing the apertures so that the bottle can be carried in the satchel or pocket, and used as a supply bottle without chances of evaporation or leakage. I must insist upon the drop method with Esmarch's inhaler as being the most convenient, agreeable and safest method that can be used.

The existence of complete anesthesia can be demonstrated by the complete relaxation of muscles, or the absence of the reflexes.

Any indication of cardiac depression must be promptly overcome by the hypodermic injection of ammonia, alcohol, digitalis or nitro-glycerine, which must be kept ready for use.

The respiratory function demands the most careful attention; the cessation of which may be caused by the mechanical obstruction to entrance of air into the lungs by the falling back of the tongue into the throat, or by the closure of the epiglottis upon the glottis, or by paralysis of the nerves presiding over the function.

The alleviation of the first two is usually attempted by drawing the tongue forward with a pair of forceps or a suture. This procedure is unnecessary, unsurgical and brutal, as it has been anatomically demonstrated that it does not accomplish the desired results. All that is necessary to relieve this mechanical obstruction is to place the hand under the neck and elevate it, thus throwing the occiput backward and the chin upward. Then place the fingers under the rami of the lower jaw and press forcibly inward and upward. Immediate relief will invariably follow.

The differentiation between mechanical obstruction and paralysis of respiration is, that in the former there is an ineffectual attempt to breathe indicated by violent efforts of the intercostal muscles and diaphragm. With paralysis, this does not occur, and this condition should be regarded as serious and the attention directed to overcoming it.

Paralysis of respiration is far more common than cardiac syncope, but is more easily remedied. This can be accomplished by one of four methods. Remembering the fact that in chloroform narcosis the condition of the brain is that of anemia, the head should be promptly placed lower than the body, thus inviting the flow of blood to the brain. If necessary, grasp the patient's ankles and standing on a chair let his head hang down to the floor. Direct an assistant in the meanwhile to administer hypodermically a stimulant such as strychnia, nitro-glycerine, caffeine or alcohol. If neither of them are efficacious, perform Sylvester's method of artificial respiration. The fourth method is one which I now always use first, and since I discovered it three years ago, have never found it necessary to resort to the others. The method is simple, prompt in action and effectual. It consists simply in dilating the sphincter ani. I had noticed for several years that dilation of the sphincter ani, under anesthesia, would cause deep and rapid respiration with a peculiar snoring sound on inspiration. This, I supposed to be a reflex irritation of the respiratory centre through the sympathetic system. Operating before the class of the Chattanooga Medical College upon a case of fissure-in-ano under chloroform anesthesia, my chloroformist suddenly and frantically announced that the patient had stopped breathing. Suddenly it occurred to me to test the theoretical idea of reflex irritation. Immediately I rapidly dilated the sphincter ani and was promptly rewarded by commencement of respiration. Since then I have had occasion to use the method six or seven times, and have invariably found it to be successful.

Above all things, in chloroform accidents retain your presence of mind and do not allow yourself to become excited. The patient needs the active, prompt and intelligent attention which can not be given in a flustrated state.

There is another important point to which I desire to call attention, and that is the employment of incompetent persons to administer chloroform. The task is usually relegated to some inexperienced medical student, or to some careless or incompetent doctor, who, either from curiosity in watching the operation, from characteristic inattention or from absolute ignorance does not observe or appreciate the signs of approaching danger, or know how to treat the condition when it occurs. Always obtain the most careful,

competent and painstaking physician possible, to administer chloroform; one who will give his undivided attention to the performance; who understands and appreciates the danger signals and can promptly meet them with the proper remedy.

The employment of incompetents for the administration of chloroform has produced many deaths and will continue to cause many more if persisted in.

It is no professional derogation or disgrace to administer anesthetics, for to do it well requires just as much scientific knowledge, just as much practical art as to perform a laparotomy or to amputate a leg.

A celebrated German surgeon was once performing an operation, when the chloroformist, a medical student, became so engaged in the operation that he neglected the patient, who coming out from the influence of the anesthetic rose to an upright position and began to look wildly around. The professor administered a scathing rebuke to his assistant by yelling to the patient, "Lie down there; you have got nearly as much curiosity as that medical student."

In conclusion, the deductions which I wish to draw for the safe administration of chloroform are:

1. The employment of a competent physician to give it.
2. No food should be allowed for six hours previous.
3. Quiet the mind of the patient by examination of the heart and the assurance of no danger.
4. Obtain a prone position and loose clothing.
5. The hypodermic injection of morphia with atropia, or strychnia.
6. Esmarch's inhaler, with my dropper.
7. Begin with very small quantity and remove inhaler when there is coughing or undue resistance.
8. Insist with mouth breathing so long as consciousness lasts.
9. In accidents, lower head, dilate sphincter ani, and use artificial respiration.

The strict observance of these rules positively insures the administration of chloroform to be as safe as that of ether; and leads me to declare that as I have never had a death from chloroform, I intend to use it until I do have one.

TRANSLATIONS.

DEATH FROM HANGING AFTER TRACHEOTOMY.*

DR REINEBOTH, HALLE.

On April 17, tracheotomy was performed on a patient on account of cancerous tumors of the neck which interfered with deglutition and respiration. Nutrition was carried on by means of an œsophageal tube until June 27, when the obstruction became insuperable. At 10.30 P. M. of June 30, the patient left his bed to go to a closet, and was not again seen until a search was instituted, which resulted in the discovery of his body at 1.30 A.. M. The body was clothed in a shirt, drawers and stockings, and was suspended from the lowest crotch of an acacia tree on a hillside. The knees were bent, and the dorsal surface of the feet and the toes touched the sloping ground. The noose was above the canula. From pieces of rope, a handkerchief found in the crotch of a taller tree, and other evidences, it appeared that some time had been spent in selecting a place for suicide, while one of the watchmen had heard a rustling in the bushes in the neighborhood of the acacia at about midnight. The body, however, at half past one, was quite cold and stiff, indicating that death must have occurred quite soon after hanging, The position of the body was such that if the patient had retained consciousness even long enough to notice that he could still breathe, he would probably have risen to his feet. A layman would certainly have

*Condensed translation from the Quarterly of Forensic Medicine and Public Sanitation, 2d vol., 1895, by A. L Benedict, A. M., M, D., of Buffalo.

considered that stoppage of respiration would be inseparable from suicide by hanging. It is probable, therefore, that consciousness was immediately lost, just as in death by hanging under ordinary circumstances, and from the same cause, compression of the great cervical vessels. In spite of the seriousness of his disease, the patient's strength was normal, as, indeed, is shown by the preparations made for suicide.

At the post-mortem examination there was found anæmia of the cerebrum, slight distension of the vessels of the pia, engorgement of the pons and medulla, and marked distension of the arteries of the base. The mechanical relations of the circulation for the head, and especially for the brain, are the same for hanging with and without access of air to the lungs. Evidently the tumors of the neck had not prevented compression of the vessels. The lack of ecchymoses on the serous membranes of the thorax deserves mention; otherwise, the presence of pulmonary gangrene, pneumonia and pleurisy, which had been diagnosed during life, obscured the condition of the thoracic viscera so that it was not significant in the present connection. There was no special hyperæmia of the abdominal organs.

Mahon has reported the case of a highwayman condemned to death in London in 1801. A young surgeon was persuaded to open the trachea and introduce a small canula before the hanging. After execution the body was delivered to the relatives, who took it without delay to the surgeon. He opened the jugular vein, and attempted in other ways to resuscitate the man. The latter opened his eyes, gave a deep sigh, again fell into a swoon and died. The details of this case are not considered altogether reliable. A case is also referred to, contributed by Taylor to Smith's "Legal Medicine," in which the mere mention is made that opening the trachea prolonged life during hanging to three-quarters of an hour. Deininger, in 1884, reported a case of death from hanging in which compression of the air passages was prevented by the lodgment of a fixed knot under the chin. The body was found half sitting, with the buttocks only a hand's breadth from the ground and the heels resting on the ground. Erik Holst has also published a similar case of suicide. From lack of imprint of the noose on the neck from the thyroid to the right ear, it seemed probable that the passage of air was not hindered. A similar case of suicide is mentioned in Schmidt's *Annual*, vol. 85, in which, however, the base of the tongue closed the pharynx and larynx.

[The translator would suggest that some of these cases might have been murder with subsequent suspension to simulate suicide.]

Schwenninger, experimenting with rabbits and cats, Paul Baron with dogs (the latter quotes, also, von Mahon and von Redrig), found that death did not occur from hanging after tracheotomy. Tammasia has made a long series of experiments in order to determine the relative importance of compression of the vessels, the vagi and the trachea in the production of death. The details not being given, only the general conclusion can be stated that, after compression of the vessels of the neck and the vagi, no sudden death occurred. Misuraca also experimented on the same lines, using dogs. The details of his experiments also are unknown to the writer, but he came to the conclusion that, though previous tracheotomy did not prevent death from hanging, the appearances both before and after death were different from those of ordinary hanging.

The writer experimented with two series of five rabbits each, the former being simply hanged, the latter hanged after tracheotomy. Immediately after simple hanging there was a stoppage of respiration and the pupils became somewhat contracted. Then followed regular, violent, inspiratory movements. A corresponding expiratory movement could not be detected. After a variable duration of these respiratory movements, there were violent extensor spasms separated by long pauses. A pretty sudden maximum dilatation of the pupil coincided with the cessation of the spasms; the corneal reflex was lost and respiratory movements ceased. In two cases, the so-called terminal respiratory movements were noticed immediately before death. The heart continued to beat up to about a minute and a-half after the cessation of respiratory movements. Death resulted in all these cases in from three to three and a-half minutes. With strangulation is connected a marked rise of temperature, amounting to about 40°C., at the moment of death.

The symptomatology of death in the second series of animals, hanged after tracheotomy, differs most conspicuously in the delay of death. There intervened from 10¼ to 19¼ minutes between suspension and death in the second series. Even in this series, the heart beat persisted only about a minute and a-half after the cessation of respiratory movements. Terminal respiratory movements were noted in three animals on whom tracheotomy had been performed, in the other two the suspension was discontinued before this stage was reached. In one of these two, the thickness of the cord prevented compression, and the rabbit was cut down at the end of thirty minutes and dispatched with a blow of the hand.

Appearances indicated that the rabbits hanged without tracheotomy, were unconscious. It was difficult to decide this question in the case of the second series. One rabbit pricked up its ears at a shrill whistle after two and three-quarters minutes suspension. Another moved its eyes after seven and a-half minutes. Baron's dogs were conscious and wagged their tails. The absence of corneal reflex, however, showed that they must have been unconscious part of the time.

In order to learn if the stretching movements were really convulsions, the last animal was cut down and freed from the noose six and a-half minutes after the beginning of the experiment. It turned wildly about its long axis, six or seven times, with its head and legs stretched backward and then remained a short time lying on its side with the head raised; then it sat up. It seems improbable to the writer and to Baron that the movements were anything else than genuine convulsions.

The marked rise of temperature noted in the first series was not observed in the second. In one of the latter animals, the rise was only from 38.3° to 39.3° C., the latter temperature being taken immediately after death, in the abdominal cavity. In the experiment in which death occurred nineteen minutes after suspension, the rise was only .1° C., before death and .3° after death.

The brains of the animals of the first series all showed the same changes. Very delicate and slightly branched vessels were visible in the pia along the greater fissures. The large vessels of the base were slightly distended and the brain substance was pale. In the second series, the whole pia was marked with numerous branching vessels filled to the smallest twigs. The arteries of the base were likewise distended to the finest branches. The pleuræ of the first series showed numerous ecchymoses; those of the second series only a few. Since, in the latter series, the aspiratory force of the thorax cannot be considered, the few ecchymoses must be ascribed to vaso-motor spasm. There was just as little indication of pulmonary hyperæmia in the one series as in the other. The animals which were simply strangled showed a more marked fullness of either the right auricle, right ventricle, or both, as compared with the left side of the heart. In both series, the fluid contents of the heart surpassed the volume of the clots. The liver was congested in all cases. The condition of the spleen and of the intestine varied. The kidneys uniformly showed a purple border at the boundary of the medulla.

Regarding the acidity (?) of the blood, the same result was obtained in all nine instances in which it was examined—including the rabbit killed by a blow. By spectroscopic examination the blood from the left ventricle showed only one absorption band, that of reduced hæmoglobin. Kotelewski's investigations agree that the blood of a corpse contains only reduced hæmoglobin. This substance is found as early as fifteen minutes after death.

N.B.—The translator takes occasion to protest against experiments on animals such as are detailed by Dr. Reineboth. These experiments have simply confirmed theoretical speculations. Their practical bearing is, at most, a medico-legal one. It must be very evident that the mere difference in weight prevents the exact application of these experiments to the case of human beings. We might argue that because a cat can jump thirty times her height without injury, a man can do the same; on the contrary, at the same distance, the lighter animal would sustain less injury than the heavier and larger one. It does not seem possible that a rabbit's weight can put any such tension on a cord as to cause compression of the cervical vessels or the vagi comparable to that effected by a weight of 150 pounds,

more or less, as in the case of human suicide. This is one of the instances in which a difference in degree amounts practically to a difference in kind. Experiments of this nature tend to bring into disrepute vivisections performed with an entire absence of pain on the part of the animal and destined to fulfil some useful purpose.

CORRESPONDENCE.

Editor of the Medical and Surgical Reporter.

SIR:—In Dr. Keiser's admirable article in your issue of May 11, 1895, he makes reference to the "King's Evil" in such a way as to apparently imply that the English people were alone in their belief in the efficacy of the "Royal touch." The practice was not peculiar to England. The French kings laid claim to the power of healing by "touch," even from the time of Anne of Clovis. And on Easter Sunday, 1686, Louis XIV "touched" 1,600 persons. But even that proudest of French kings did not ascribe the cure to the *royal* touch, for he used the following words: "*Le roy te touche, Dieu te guerisse.*"

The belief was in the descendent of a Saint, not in the King. When Charles Edward Stuart, the Young Pretender, would convince his followers of his legitamacy in 1745, he "touched" a scrofulous girl.

The office for the ceremony of "touching," which remain in the book of Common Prayer to 1719, goes to show that the power of healing was not due to the kingly office but inherited from the Saintly Confessor. Happily the whole superstition is removed fromamongst us: but it is well to clearly keep in view the actual belief of the time and not be misled by the very misleading title the "royal touch."

The second matter I would draw attention to is the "Sympathetic Ointment" of Kenelme Digby. No greater evidence of a false theory producing good results ever happened in medicine than the use of Digby's powder. In his pamphlet "*Of the cure of Wounds by the Powder of Sympathy,*" published in London A.D., 1650, Digby tells an absurd story of a Persian who traveled across Asia and Europe to confide to him the secret of the "Powder of Sympathy." It is difficult to say what Digby's object was in the story or in the introduction of the powder.

Except Defoe, no Englishman was in so many scrapes and strange scenes. He had belonged to all the political parties of his time and had fought duels with every class of politicians. Amongst his other studies, medicine came in for some attention and it is just possible that from observation he found the frequent dressing of wounds injurious, and that he invented the fable to correct the faulty practice of the surgeons of his day. Digby was quite capable of inventing the story to gain general acceptance for his powder, and we cannot think that the theory of "sympathy" put forward was seriously believed in by the friend of Decartes.

GEORGE FOY.

DUBLIN, June 2, 1895.

Tearing Out of Nerves as a Cure of Neuralgia.

Adenot, of the French Congress of Surgery (*Revue de Chirurgie*), advocated, in neuralgias, section of the nerve as high up as possible, then seizing the peripheral end with a pair of forceps it is to be wound around it until as much is removed as possible. Eight or ten centimetres can thus be taken away. Good results have been obtanied by this method of treatment by Mollière, Tripier, and Gangolphe. Chipault also spoke favorably of the method, having had a complete success with it in a case of neuralgia of the forearm which had previously resisted section of the ulnar nerve.

Menorrhagic Chlorosis.

Dr. Ch. Ligeois prescribes:

Sulphate of iron.....	gr. xxxviii.
Ex. of hyoscyamus.....	gr. xv.
Alcoholic extract of hydras. canadensis.....	gr. lxxviii.
Powdered licorice root.....	gr. lxxviii.

Make 100 pills Sig: Two at each meal, both during and between the menstrual periods.

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SATURDAY, JUNE 15, 1895.

EDITORIAL.

"IN THE BENEVOLENCE BUSINESS."

At a recent anniversary of one of the large and needy hospitals in the millionaire district of this city, says the *Medical Record,* a speaker filled with enthusiasm for the benefits of the present hospital system is reported to have said that one of its greatest boons was the saving of expense to the rich man. In proof of such an unjust and outrageous claim he bolstered his statement by comparing the items of expense when a patient was treated at an ordinary hotel by his regular medical attendant with those in a well-equipped charity institution supported by the liberal contributions of a Christian organization. Instead of a daily expenditure of $5 for hotel accommodations, $5 for a trained nurse, $5 per visit for the physician, and $5 more for the board of the nurse, not to speak of the cost of the medicines from an expensive pharmacy, the patient who entered the hospital in question needed only to pay for his board and a private room. All other outlays were unnecessary and were included in the one item named.

"Naturally in this connection we think of the physician, who is the only one whose services are virtually considered of no account. The high price of the room added to the donations of the charitable enable the hospital to make a handsome profit, even including the general expenses for nurses, medicines, instruments and dressings. The attending physician or surgeon, who might be looked upon as the real personage who makes any hospital what it is, is not only entirely ignored, but a deliberate attempt is made to swindle him and his outside associates in attempts at gaining a legitimate livelihood. It would appear from all this that the evolution of medical charity is distinctly in the direction of eliminating the doctor. Another step in this direction would be for hospital managers to go into the wholesale proprietary medicine business and prescribe remedies on their own ac-

count free of cost to the patients. Why should not money be invested as well and as profitably in medical charities and millionaire clinics as in railroads, wheat and mining stock? The men who run the hospitals can command all the needful capital on the hypocritical plea of charity to the poor, can obtain medical services free, can build magnificent edifices, endow beds for cast-off servants, beg for church subscriptions, and what is to hinder them from running the medical charity business entirely in their own interests? They are doing it all the time, though less openly than the distinguished speaker in question has so frankly admitted."

Just so! "What are you going to do about it?"

A "well-equipped charity institution supported by the liberal contributions of a *Christian* organization" is good, but a well-equipped charity institution supported by the liberal contributions of an organization, to which, in the popular estimation, the term Christian would be utterly irrelevant and misapplied—for instance the ordinary State legislature—is much better in that it is a cheaper method of securing the capital necessary to enable professional philanthropists to carry on the business of benevolence and compete with the untaxed foreign production of medical paupers.

That this liberality obtains in the Commonwealth of Pennsylvania (in the case of this legislative body whose proclivities may be presumed on the theory that actions speak louder than words, no attempt has ever been made to misapply the term *Christian*), will appear from the appended incomplete list of appropriations to medical pauper-factories as reported by the Appropriation Committee at the present session. The first column of figures represents the modest amounts asked for and the second column the parsimonious alms to the needy medicants as pared down by a miserly committee.

Medico-Chirurgical Hospital	170,000	150,000
University of Pennsylvania	500,000	200,000
University of Pennsylvania Hospital	100,000	55,000
Jefferson Medical College	165,000	112,000
Pottsville Hospital	30,000	20,000
Columbia Hospital	5,000	3,000
Ham. of Medical and Surgical Hospital, Reading	26,000	10,000
York Hospital and Dispensary	16,000	4,000
Pottstown Hospital	18,000	17,500
Mary M. Packer Hospital, Sunbury	10,000	8,000
Women's Hospital, Philadelphia	50 000	8,000
Carbondale Hospital Association	12,000	12,000
Home Hospital Association, Erie	6,000	6,000
St. Vincent's Hospital Asso'n, Erie	6,000	4,000
Corry Hospital, Erie Co. Association	10,000	4,000
Chester County Hospital	25,000	6,000
Reading Hospital	30,000	15,800
Good Samaritan Hospital, Lebanon	13 050	6,000
Williamsport Hospital	30,000	10,000
Meadville City Hospital	7,500	5,000
Spencer Hospital, Meadville	10,000	5,000
Lackawana Hospital, Scranton	111,000	25,000
Kane Summit Hospital Association	7.372	4,000
Harrisburg Hospital	33,000	5,000
Shenango Valley Hospital	10,300	7,500
Bradford Hospital, Bradford	7,000	7,000
Lancaster General Hospital	20,000	4,000
Charity Hospital, Norristown	10,000	7,000
Wilkesbarre City Hospital	60,000	25,000
Altoona Hospital	15.600	12,000
Pittston Hospital Association	25,000	14,000
Samaritan Hospital, Philadelphia	12.500	3,000
Christopher's Hospital for Children, Philadelphia	10,000	4,000
Beaver Valley General Hospital	25,000	7,000
Sharon and Sharpesville Hospital	17,000	9,000
Memorial Hospital Association, Monongahela City	12,000	12,000
Adrian Hospital Association, Jefferson county	45,000	30,000
Conoquennessing Valley Hospital	12,500	12,500
Gynecean Hospital, Philadelphia	35,000	25,000

Many ideas of interest to medical men may be inferred from a thoughtful consideration of these figures in connection with the remarks above quoted. It must be admitted that the position of a legislature in philanthropizing with the funds of its constituents is not an easy though, perhaps, an enviable one. For, on the one hand, public opinion, although it favors a liberal support of all charities for the genuinely helpless and needy, and especially for such charities as are "entirely dependent upon voluntary contributions' —from private individuals, will not at least theoretically, tolerate the reckless or injudicious expenditure of the State's treasure, nor the subversion of public money to the service of ends confessedly personal. On general principles, the money of the people must be applied only to genuine needs. Too much must not disappear in transit on its way to do its designated service. It must not be loosely thrown into the hands of irresponsible parties who will fail to ensure its certain and conscientious application to the pur-

poses for which it was granted. Practice has demonstrated that reckless, indiscriminate, injudicious, and needless handling of the public funds is something more than tempting to petty larceny from the tax-payer; it is liable to breed the gentleman-pauper (thief), and curiously enough, seems to have a tendency to impair confidence in law-makers and in public officials generally.

On the other hand, failure to furnish sufficient protection to the industry will drive professional philanthropists out of the benevolence business as soon as the outlay becomes equal to or exceeds the income.

Furthermore, too niggardly contributions to worthy objects would be liable to produce in the popular mind a confusion of the State with the Church, and religion is never improved by an alloy of politics.

The entire withdrawal of "State support" will go a long way towards solving the "hospital question."

ABSTRACTS.

THE THERAPEUTIC USES OF GUAIACOL.

Although the therapeutic history of guaiacol has been known for the past few years, the only clinical observations on which any reliance can be placed with regard to its rational employment are of quite recent date. Formerly, guaiacol was extracted from various kinds of creosote, impure products which were more or less charged with phenol and, consequently, likely to give rise to accidents. Since 1893, a pure product, perfectly definite, has been obtained by synthesis, by M. Béhal and M. Choay. Synthetic crystallized guaiacol should replace the liquid guaiacols in materia medica. It is the same which was used during the present year by M. Linossier, M. Lannois, M. Guinard and others, in experiments, the results of which illustrate the therapeutic value of guaiacol for external and internal use.

Internally, guaiacol is generally well borne by the stomach owing to its local anæsthetic action. It may be given by the mouth or hypodermically. When given by the mouth, the dose is from 1.6 grain to 8 grains during the twenty-four hours; in pills containing from 10.8 to 11.6 grain in capsules containing the same quantity of guaiacol in an oily solution; or in alcoholic solutions, as, for example: 1. Guaiacol, 150 grs.; rum, 450 grs.; distilled water, 6½ ounces.—From eight to ten teaspoonfuls may be taken every day, in milk or water. 2. Guaiacol, 150 grs.; vin de Bagnols, 33 ounces.—From one to three dessertspoonfuls may be taken during the day.

When hypodermically administered, smaller doses are used; from 1.6 to 4 grains of guaiacol dissolved in perfectly sterilized and neutral olive oil. A one-to-five solution is generally used, but equal parts may be employed.

Guaiacol may be used in:—

Pulmonary phthisis. It seems to be especially indicated in cases where the progress of the phthisis is sluggish, succeeding the period of softening with abundant expectoration. It should be handed prudently in erethetic phthisis with a tendency to congestion and hæmoptysis, and in tuberculosis in the beginning. The drug should be given, according to the condition of the digestive canal, by the mouth or hypodermically. The hypodermic injections of Weill and of Diamantberger are preferred in the beginning by certain clinicians. Weill employed the following formula: Crystallized guaiacol, 75 grains; sterillized oil, 3-25 ounces. From two to three syringefuls of this solution injected every day.

2. Chronic bronchitis, dilatation of the bronchi, fœtid bronchitis, and pulmonary gangrene. In three cases of pulmonary gangrene, Weill obtained very good results with hypodermic injections of guaiacol.

The solution should be more concentrated than that used in phthisis; for instance, 15 grains of guaiacol and 150 grains of sterilized oil. In pulmonary gangrene, according to M. Lop, from one to four syringefuls may be injected every day. The same procedure and the same doses have been successfully tried in fœtid bronchitis, and in dilatation of the bronchi with sphacelus of the mucous membrane. In chronic bronchitis and in dilatation of the bronchi, Grainger Stewart recommends guaiacol not only in hypodermic injections but in intralaryngeal injections. He employed the following solution: Crystallized guaiacol, two parts; menthol, ten parts; sterilized olive oil, eighty-eight parts.—Sixty grains of this were injected into the larynx twice a day. M. Naught also employed this method in fœtid bronchitis, with good results, All laryngologists, at present, use guaiacol for direct injections into the larynx and the trachea.

3. Purulent pleurisy. In this affection Robertson employed injections of guaiacol with very good results. He found that they were efficacious in diminishing the purulent secretion after empyema.

In the external use of guaiacol painting has become a common practice, and it is as important as the hypodermic injections, or its administration by the mouth. It has been used pure, or with equal parts of sterilized olive oil or glycerin. For the first painting, thirty grains of oil solution should not be exceeded, as stronger doses have provoked symptoms of collapse. The solution should be applied over a large surface. The preferred regions may be the forearm or the calf of the leg. Guaiacol has also been employed in combination with tincture of iodide and vaseline.

Painting with this drug has been used.

1. Tuberculosis. In this disease the paintings seem to have a powerful antipyretic action. In miliary tuberculosis and in the acute attacks that occur during the course of chronic tuberculosis, according to Bard, Courmont and Boix guaiacol, gives the most remarkable results. Boix reported several cases where not only small doses resulted in rapid and intense effects on the fever and on the general condition, but the effects were apparently lasting and definitive. In several cases there were bacilli in the sputum. The drug should not be used in the treatment of very feeble persons in the last stage; moreover, it has no action on the hectic fever of this period.

2. Typhoid fever. Montagnon employed paintings with guaiacol over the inguinal region when the temperature was high, and he was able to combat hyperthermia in twenty patients, Eight grains were used at a time, and not more than thirty grains during the day. With repeated paintings Moisy was able to maintain an almost normal temperature, and he noticed that the antithermic action of the drug seemed to increase. Cheron, however, pointed out the dangers that might follow a too prolonged use of the drug, owing to the insufficient renal elimination of guaiacol. Montagnon recommends the use of guaiacol especially in cases where the cold bath is contraindicated. Desplats also obtained very good results in typhoid fever with guaiacol.

3. Pleurisy. Miron Sigalea painted the entire affected side twice a day with the the following mixture: Guaiacol, 45 grains; glycerin and tincture of iodine, each, 300 grains. He has also seen this treatment succeed in recurring effusions after a first thoracentesis. In these cases the guaiacol appeared to have a diuretic effect, which was also observed in a case of scarlatinous nephritis with anasarca and anuria. Desplats also found this diuretic action in typhoid fever and in typhus.

4. Infectious pyæmia. In influenza, pneumonia, rheumatism, etc., painting with guaiacol has an ordinary antipyretic action. In intermittent fever Kohos moderated the attacks in the beginning by injecting a mixture of guaiacol and lanolin over the spleen. In erysipelas of the face the paintings, according to Bard, may diminish the intensity and gravity of the affection. In all affections where the renal elimination may be insufficient, the administration of guaiacol should be cautiously made and its action carefully watched.

5. Pultaceous angina and amygdalitis. According to Darboue, Raymond, Rhodes and others, pharyngeal paintings give very good results in combating not only the fever, but the pain. The glycerin solution is preferable to the oily solution, and, for an adult, the two ingredients are prescribed in equal parts. For children, however, the dose should be weaker, one part of guaiacol and three of glycerin,

and its action closely watched. The first burning is sharp and the taste rather disagreeable, but the relief is rapid. The difficulties of delugtition are very much diminished.

6. Neuralgia. Painting with guaiacol seemed to give good good results in sciatica, in intercostal neuralgia, and in coxalgia. Balzer employed the following ointment in blennorrhagic orchitis: Guaiacol, 75 grs.; vaseline, 450 grs. In the very painful forms he applied the first painting over the abdomino-inguinal region with from thirty to forty-five grains of pure guaiacol, and after the first sharp burning relief generally occurred at the end of about half an hour.

The dominating action of the drug is antithermic. This has been observed especially in cases of tuberculosis, although this action of the drug is successful in other pyrexiæ. The analgetic action of guaiacol must not be overlooked, for it has rendered great service in certain painful affections in the treatment of which we have often been powerless to combat the element of pain with other drugs.—*Presse Medicale.*

THE USE OF ALCOHOL IN SICK CHILDREN.

Dr. Seibert, in a paper read before the Section on Pediatrics, New York Academy of Medicine, March 14, 1895, states:—(*Archives of Pediatrics*), while Demme in his classical study on "The Influence of Alcohol upon the Organism of the Child," published in 1891, has given a review of all the possibilities of chronic alcoholic poisoning in children, he only alludes to its use at the bedside, by expressing the wish that it may there, never be entirely suppressed. Strümpell's masterly paper, read in September of 1893 at the 65th annual meeting of German Physicians, "On the Alcohol Question from the Medical Point of View," points out the pathological changes caused by the habitual moderate use of alcohol in adults, but alludes to children in only a cursory manner; and though an excellent medical sermon preached to German physicans upon the evils of the beer-drinking habit of the Teutonic race, no precise statements as to when and where alcohol should be employed is found therein any more than in Demme's work.

If I attempt to describe some of the conditions in sick children where alcohol may, and may not be of use, I do so with the distinct understanding that in the future the number of these indications may be changed, and that the opinions expressed are strictly my own, and therefore open to criticism to all who may think otherwise.

1. Gastro-Enteritis. In an article on "Acute Gastritis in Infants," published in 1884 (*Yahrbuch für Kinderheil Kunde*); I pointed out the necessity of forbidding the drinking of beer to mothers nursing infants suffering from gastro-enteritis. In a paper published five years ago, I said: "We can exclude all forms of gastro intestinal disturbances in children from the list of diseases where alcohol is beneficial. In acute cases, even in cholera infantum, large quantities of water and smaller ones of black coffee or tea, will stimulate more than any quantity or quality of alcohol, besides, not irritating the mucous membrane, already in a diseased condition."

In an article on the "Mechanical Treatment of Gastro-Enteritis in Children" (*Medic. Monatsschrift*, 1889) I pointed out the fact that the only rational course for the therapeutist to pursue in these cases, was to rid the alimentary canal as soon as possible of its bacterial invasion, and to stimulate by supplying the blood and the tissues with large quantities of water. Epstein in 1891, (*Festschrift* to Prof. Henoch) arrived at the same conclusion, and to-day this indication is universally recognized. To attempt the stimulation of such patients with alcohol after cleansing the alimentary canal is superfluous, but to give alcohol to enteritic children while yet the decomposing milk remains in the intestine and the development of bacteria is perhaps supported by the constant supply of milk given to the child, is irrational and harmful.

2. Typhoid.—In connection with all the varieties of acute and chronic gastro-enteritis, from the most intense form of cholera infantum down to the mildest type of dyspepsia, we had better dispose of the

possible use of alcohol in the typhoid of children. Brown's theory of sthenia and asthenia, and Todd's teachings had spread the alcohol treatment of typhoid fever from England all over Christendom. Enormous quantities were given. Demme tells us, "that it was not unusual to give two to three bottles of strong red wine in addition to large quantities of champagne and cognac to an adult in the course of twenty-four hours; sometimes a quart of cognac was given daily."

I have used alcohol in typhoid patients children and adults, in private and in hospital practice during the last seven years only in emergencies. Ninety-five per cent. of my patients never taste it. Even during convalesence, alcohol can only retard and impair the digestive ability of the stomach by causing catarrh and decreasing its motion, thereby giving rise to abnormal bacterial activity in spite of hydrocloric acid, as Kaufmann, of New York, has recently shown (*Berl. Klin. Woch.*, Feb., 1895); and this at a time when this organ is expected to perform more work, just after having been weakened by the disease and possibly the medicines of the physician.

As typhoid usually runs a mild course in children and collapse will hardly ever be observed, if but the proper diet is adhered to, we may safely say that alcohol ought not to be given to typhoidal children, as it will increase gastric and intestinal fermentation and so the systemic infection. Alcohol does not disinfect the alimentary canal any more than the blood, as modern bacteriological research has demonstrated. As an antipyretic in typhoid, alcohol has at no time been taken seriously by any physicians of note since clinical thermometers are in use, and its sedative action can much better be brought about by safer remedies.

3. In fibrinous and broncho-pneumonia in children alcohol has been given in enormous quantities, and it has become a habit with some of us to occasionally point with pride "at the very large quantity of alcohol which young children tolerate during pneumonia." As to this "toleration" I will here ask, "what could these little sufferers do but to tolerate this abuse?" I am sure they would have protested if they had been older instead of "young" children. This idea to make up for the small size of the patient by the large size of the whiskey-bottle, was based upon our ignorance as to the true cause of heart weakness in catarrhal and croupous pneumonia. Klemperer and his brother and others have isolated the toxines of some varieties of pneumonia and have demonstrated their destructive action upon the nerve centres.

I do not use alcohol in pneumonic children at all, so long as they are willing to swallow cold water, tea, coffee and broths. In a collapse, threatening or present, I do use it, in good doses and in concentrated form, but I hold that we can not prevent heart failure not yet in evidence, by the regular administration of small or large quantities of alcohol. On the contrary, I am convinced that by regularly bringing this quick-acting poison in contact with the stomach and the nerve-centres, we cause pathological conditions well known to us in the healthy child after drinking liquor, but which we do not recognize in the patient, partly because the symptoms of the disease disguise them, and partly because we are blinded by our own success in increasing the volume of the pulse (due to vaso-motor paralysis), to see the harm we do.

An alcohol-fed child will digest still less during pneumonia than one who's stomach is not constantly insulted in this way. So it is in healthy children and so it is in sick children, but the damage done in the latter is by far the greater. The idea that the toxines of pneumonia counteract the alcohol so as to destroy its toxic effects and to leave only its benificent properities, is one of those many pious grey theories, ripe and ready to be thrown into the waste-paper basket of modern medical knowledge.

Alcohol-fed pneumonic children do not regain their appetite and digestive power after the attack is over as others treated without it, for the resulting gastritis will as surely then be in evidence as the one in the adult male who returns from a protracted spree. The anæmia and malnutrition must therefore be increased by the alcohol treatment, aside of the nervousness due to destroyed nerve-tissue, and the ultimate complete recovery to the normal state must be prolonged.

Insufficiency of the heart's action in pneumonia in children is due to the destructive action of the absorbed toxines upon the nerve tissue and to insufficient oxydation of the blood, *ergo* carbonic acid gas poisoning. Against the latter, a constant supply of fresh cool air (irrespective

of the time-honored 70° F. temperature of the sick room), will guard well in most cases; against the action of toxines we are practically powerless. Alcohol does not decrease the strength of the toxines in the blood any more than in a test-tube, and we have good cause to infer that the blood can come up to the emergency much better without its vitality and reactive power in producing anti-toxines being interfered with by balcohol.

The nerve tissues, peripheral and central, are *never* benefited by alcohol. Destruction of nerve tissue is the well-recognized mission of all alcohol brought into the system, even in repeated small doses, as Strümpell has shown. And what about the reaction following each exciting dose? Depression, in exact proportion to the amount of alcohol taken, follows in every instance in the healthy human body, and also dnring pneumonia, leaving the nerve-centres guarding the heart's action certainly not in an improved condition. Abundant clinical experience, added to known pathological facts, therefore, have induced me to use alcohol in pneumonic children only in occasional emergencies, where smaller doses will do more good and less harm.

4. In scarlatina alcohol is not tolerated by the stomach at all during the first few days, as nausea usually teaches us. In malignant cases, causing destruction of blood-cells and death in from six to forty-eight hours, I have never seen the slightest improvement, even hwen large doses of ether and alcohol were given hypodermically. In mild cases, without pharyngeal necrosis alcohol is entirely out of place, as well as in *measles*; as the hyperæmia of the cutaneous capillaries by partial paralysis of the vaso-motor nerves (from which cause we noticed the flushed face of the drinker) can only be increased, adding to the distress of the child and the better accommodation of the bacteria in the skin.

In septic conditions during scarlatina, induced by absorption from the pharyngeal necrotic tissue into the cervical lymph-nodes and the general circulation, now and then causing abscess, a judicious dose of light wine, or whiskey in water, appears to be of benefit, relieving pain and insomnia. It is my habit to give coffee, tea, cocoa and camphor during daytime, and a fair dose of alcohol at night, so as to somewhat subdue the excitement and restlessness caused by necessary irrigations of the upper air-passages. With such a night-cap, combined with a carefully selected dose of an antipyrine solution (this given per rectum), I have produced refreshing sleep, but often when gastro-intestinal disturbance caused me to abandon its use again, the children seemed not to be the worse for its want.

Some fourteen years, ago I treated a boy of six years, for two months, during a severe attack of septic scarlatina. His father kept a wine shop and alcohol was freely given. Four weeks after my last visit I found the little fellow suffering from a peculiar form of gastritis, allowing him to eat well, but also compelling him to leave the table and to vomit up all of the food taken. He confided to me the secret that he had formed the habit of not alone taking all the wine given to him, but also to help himself to extra drinks whenever no one was near. A speedy removal to a temperance boarding house in the Orange mountains promptly cured him of his alcoholic gastritis.

5. In dyphtheria the free use of alcohol has been universal. The enormous mortality of about 40 per cent., in places supplied with the best medical talent, like London, Paris, Berlin and New York, does not exactly speak for its value in this ailment. In mild cases I have not used it at all for years, and I doubt very much whether my patients suffering from severe attacks (showing general invasion of the naso-pharyngeal cavity from the start), derived any benefit from the large doses I gave them. The diphtheric paralysis caused by the toxin of the Loeffler bacilli can certainly not be prevented by alcohol, no matter how much is given, but that we may assist a myo-carditic heart-muscle to do its work, is piously believed by many. I doubt it and considering that Strümpell claims to have seen degeneration of the myocardium from habitual moderate doses of alcohol, we may ask if not possibly large doses at least aid the diphtheria virus in increasing degeneration here where we expected to help instead of to hinder? Certainly an open question, waiting for investigation.

So far I have given alcohol in diphtheria whenever the heart seemed to give out, but then in large doses and only for a day or two. Frequent small doses may pave the way for the toxines into nerve-tissue by

aiding in attacking their structure. I have given a strong man, on the third day of a virulent attack of gangrenous diphtheria, when his pulse was 140 and his rectal temperature 96° F., a full quart of French cognac in twenty-four hours, after which time his pulse fell to 120 and his temperature rose to 104.5° F., but no more after this; and a girl of six with a rectal temperature of 97° F. and a pulse of 138 on the fifth day of a severe attack of diphtheria, half a pint of rye whiskey in twelve hours, and they both recovered, and I fondly hope that this treatment saved their lives, but my scepticism does not permit me to assert this, because thorough local treatment (which had not been used till then), certainly stopped the further spreading of the local affection, and possibly the antitoxines developed in the blood in spite of the alcohol, did the rest. In twenty-seven cases of diphtheria seen by me since Dec. 1, 1894, and treated by Behring's serum, among which were five with laryngeal infection, alcohol was given to one child of eleven months, and this was the only one that died.

As most cases of diphtheria are mixed infections, caused by different varieties of bacteria associated with the Loeffler bacilli, we still may assume that heart weakness may be caused by some of the other germs, and therefore I do give large doses of alcohol in such emergencies, but only temporarily.

6. In nephritis alcohol can only do harm in large doses. Strümpell insists that acute alcoholic nephritis exists as well as chronic. Alcohol has a strong action on the epithelial cells of the kidneys, and therefore may occasionally be used to advantage in emergencies. Light beer has served me well in a few cases. On Jan. 1 1894, I was called to intubate a girl of five, then ill with "sore throat" for a week. A culture showed Loeffler bacilli. Two days later the child had a sudden convulsion and the temperature rose to 105° F. During the next twenty-four hours but one tablespoonful of bloody urine was passed. Nausea caused the child to even throw up cold water. Diuretin per rectum had no effect. In desperation I offered her beer, which she had never before tasted. She took it, retained it and lived on it for two days. Urine came and slowly improved. On the third day she took buttermilk, later on, milk, and she made a slow but complete recovery. Albumen persisted for a month, blood was found for two weeks. She was given no more alcohol after she took the buttermilk.

Knowing the effect of large doses of alcohol on the healthy kidney epithelium, and knowing the frequency of diphtheric nephaitis (to which knowledge of the profession at large seems to have been helped but recently, through the introduction of the antitoxine), we may well ask if routine alcoholisation in diphtheria may not cause great mischief? In the nephritis almost invariable accompanying severe gastro-enteritis in young children, usually never looked for, alcohol is out of place, as well as in post-scarlatina nephritis.

In conclusion, I believe that the amount of alcohol given to sick children by physicians (aside of occasional emergencies few and far between), is in direct proportion to their ignorance of the proper dietetic and hygienic management that their little patients are in need of.

Sequelae of Symphyseotomy.

Tissier (*Archives de Tocologie et de Gynècologie,*) exhibited recently at a French society a woman upon whom he had performed symphyseotomy six weeks previously. She was a multipara and rachitic. The conjugate was about three inches. Her previous labors had been severe. Labor was induced by Tarnier's bags and the forceps applied three times without result. Symphyseotomy was then performed. The hemorrhage was free. When the public bones parted a prolapse of the pelvic organs was distinctly observed. Delivery was accomplished with ease. There was troublesome tympanites about the third day. By the seventeenth day the symphsis was not consolidated and the public bones still slid on each other a little, consequently the patient could not walk long without feeling fatigued. A thrombus developed around the levator ani on each side during the puerperium, but both became absorbed. The child died when a few weeks old. The question as to the cause of the tympanites was raised at the society. Tissier believed it to be due to the prolapse of the uterus, which intercepted the free descent of the flatus. Fournel believed it to be due to temporary intestinal paralysis, as is frequent after abdominal section.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Strychnine Delirium.

Those members of the medical profession who have employed caffeine very largely in the treatment of cardiac and renal disease have recognized that large doses of this drug, continuously administered for a considerable period, developed in certain individuals what has been popularly called "caffeine craziness." In other words, the full medicinal doses required by the condition of the heart or kidneys have also been sufficiently large not only to produce an increased activity of the brain, such as is seen when coffee is taken in large amounts, but also have gone farther than this, and by the very cerebral stimulation produced temporary insanity. Within the last few years the medical profession has been employing in certain states what may be considered as massive doses of strychnine in the treatment of failing repiration or circulation, and has obtained therefrom very good results. It having been found that these full doses of strychnine acted favorably, when given in an emergency, we have been tempted to continue their administration where the symptoms were relieved but temporarily, and, as a result, have oftentimes been pleased with their effect. On the other hand, a sufficient number of cases have been seen in which cerebral disturbance has followed these large doses to put us continually on the lookout for such untoward symptoms. As a rule, he who administers large doses of strychnine in an emergency is on the *qui vive* for some twitching of the muscles of the forearm or other portion of the body as an evidence of the physiological action of the drug. While we believe that these symptoms are commonly produced by a single administration of the remedy, we are also confident that its continued administration in full doses frequently fails to produce these evidences of heightened reflex activity, and in their place causes a more or less active delirium, in which the patient frequently refuses to take his medicine, or develops the delusion that his attendants are conspiring to poison him or do him some other injury.—*Thera. Gazette.*

Acetanilid in the Treatment of Malarial Fever.

At a meeting of the Philadelphia County Medical Society, Dr. Oscar H. Allis read a paper contributed by Dr. Benjamin Brodnax of Brodnax, La., in which the recommendation was made that acetanilid should be used instead of quinine in the treatment of chills and fever. Dr. Brodnax states that he has treated several hundred cases in this way and always successfully. If there is time before the chill, he gives from one-and-a half grains to two grains of calomel in one-quarter-grain doses half an hour apart; after which, whether the bowels have moved or not, from two to six grains of acetanilid, according to the age of the patient, are given twenty minutes or half an hour before the expected chill. Gentle perspiration with natural sleep usually promptly follow the administration of the drug and the patient wakens, entirely relieved, in about half an hour. Should this effect not be produced, a second dose of equal amount should be given half an hour after the first. If there is not time before the chill to administer the calomel, this may be deferred until after the acetanilid has been given and its effect has passed away.

The after-treatment consists of the administration of the following:

Diluted nitro-muriatic acid....1 fluid ounce.
Ferrous sulphate.....80 grains.
Mix, and allow to stand for twenty hours.
Dose—Ten drops in water three or four times a day.

Prognosis of Diabetes.

Dr. Arthur C. Jacobson has beencontributing a series of articles to the Brooklyn *Medical Journal* on Diabetes Mellitus. In speaking of the prognosis of this disease, he says: "Generally speaking, true diabetes is an incurable disease. Cures, however, have been reported, but it is probable that many such cases were of the transient or intermittent variety of glycosuria, occasionally observed in corpulent individuals given to overfeeding, or in those subjected to severe mental strain. This form is very amenable to treatment. Tyson, however, reports a case of true diabetes in a girl twelve years of age terminating in complete recovery, but it is to be born in mind that apparent recovery does not exclude the possibility of a fresh outbreak of the disease."

Influence of Cold Baths on Toxicity of Urine in Febrile Disease.

Dr. Ausset, an army surgeon (*Medical Week*), has been making extensive experiments in the effects of the cold bath upon urinary toxicity in infectious diseases, especially typhoid fever, scarlet fever, and measles. He finds that in all cases, the toxicity of the urine is greatly increased under the influence of cold baths. He attributes to this fact the excellent effects of Brand's method of treating febrile diseases by the cold bath, the temperature being lower and the course of the disease being favorably influenced by the increased elimination of the toxines produced by the specific microbes of the disease.

THERAPEUTICS.

Cocaine Cataphoresis in Neuralgia.

It is pleasant to have one's views on the treatment of neuralgia in superficial nerves corroborated by such experience as this of Dr. McGuire. Neuralgias in superficial nerves (such as branches of the trigeminus) are always best treated by cocaine cataphoresis, so far as the immediate relief of pain is concerned. This method is always the most satisfactory where the pain is due to a local lesion in the nerve and the neuralgia is not central.

The case instanced by McGuire was that of an adult man, with neuralgia of the inferior dental branch of the inferior maxillary nerve. After exhausting ordinary remedies in this case, he cut the nerve, and gave relief; but the pain returned some months, after in the lingual branch of the same trunk.

Mastication was so painful that he was compelled to live on liquid food. Swallowing, speaking, or moving the tongue in any way brought on violent paroxysms of pain.

The author goes on to say:

"I determined to try the effects of the cataphoric use of cocaine over the nerve as it passes to the side of the base of the tongue, and was induced to do this by remembering that my son, some months ago, had not only relieved, but permanently cured, several obstinate cases of neuritis by this method.

"I took the positive pole of a galvanic battery, covered it with a piece of absorbent cotton, saturated it with a 10-per-cent. solution of muriate of cocaine, and placed it in the mouth over the portion of the nerve which is the usual site of operative procedures, placed the negative pole on the external surface of the cheek, and passed a current of five milliamperes for a period of five minutes. The pain was instantly relieved, and I must confess, much to my surprise, did not return for twenty-four hours, a period much longer than would be required for the effect either of the electricity or of the cocaine to wear off."—*Gaillard's Med. Jour.*

Hot Saline Baths in Infantile Paralysis.

In the chronic stage of infantile paralysis, the mother should be instructed to bathe the affected parts daily with a hot solution of common salt. The solution should be of the strength of three or four ounces of salt to a quart of water, and the application should be as hot as can be borne, and should be followed by vigorous rubbing of the affected parts with oil. The mother should also be instructed to flex all the joints completely, taking care to antagonize any tendency to equinus, or equino-valgus or varus, which may occur. The writer recently operated upon a case in which the most extreme degree of equinus possible had resulted from neglect of this precaution. Both feet were affected. In one foot the equinus was complicated with varus, and in the other with valgus. These cases are often neglected, to the great detriment of the patient. Applications of electricity, systematic massage, and skillfully directed gymnastics are of great value in these cases, and should be employed as soon as the lesion is discovered, or at least as soon as the acute symptoms have disappeared. In some cases orthopædic apparatus is necessary to prevent serious deformity. Great results can often be accomplished in these cases; even the most unpromising symptoms may sometimes be made to yield surprising results by persevering treatment.—*Ed. Mod. Med.*

Blood Alterations in Ether Anesthesia.

In seeking for the cause of anesthesia in ether inhalations, Dr. J. C. DaCosta gives, in the *Medical News*, the results of a series of cases carefully studied, in which he is of the opinion that not only the direct action of the ether on the nerve elements, but an alteration in the composition of the blood, causes this unconsciousness. His conclusions are:

1. Etherization produces a marked diminution in the hemoglobin of the blood.
2. The red corpuscles and the hemoglobin are especially affected in blood previously diseased, in such conditions, for instance, as anemia.
3. Irregular reports are due to faulty observation, to the presence of altered hemoglobin in the blood, to the faulty aberration as to color of a Fleischl instrument or to taking the blood before anesthesia is completed.
4. The white corpuscles show irregular changes which are not characteristic, and exhibit variations not more pronounced than would be found in the same number of samples of normal blood on different examinations.
5. Age does not apparently influence the results.
6. Ether-pneumonia may possibly be due in some instances at least, to the action of intense cold upon the lungs, produced by the action of ether-vapor.
7. Edema of the lungs may arise from contraction of the pulmonary capillaries, thus producing a loss of *vis a tergo* and damming up of blood in the veins. Furthermore, the same condition may produce sudden paralysis of the heart.
8. The often-quoted observation as to the effect upon the hemoglobin of shock and hemorrhage requires enlarged repetition upon human beings before the statements can be unreservedly accepted that hemorrhage causes a great fall in the amount of hemoglobin, but that shock does not affect it.
9. The chilling of the blood-stream may be responsible for the nephritis that occasionally follows etherization.
10. Prolonged anesthesia profoundly deteriorates the blood and strongly militates against recovery; hence rapidity of operation is most desirable.

Alumnol.

Chotzen (*Berlin Klin. Woch.*) has investigated the therapeutic action of alumnol, a substance discovered by Filehre of Breslau. Alumnol is an aluminal salt, which contains about fifteen per cent. silver and five per cent. aluminium. It is a fine white powder, very soluble in water, in glycerine and in

warm alcohol. It is insoluble in ether. Henz and Leibrecht have already reported on its physiological action, and have shown it to be a harmless, odorless and antiseptic astringent. The author has used it in more than three hundred cases. It was found curative, when applied pure to soft chancres and abscesses, mixed in the proportion of ten to twenty per cent.; with inert powders in balanitis, erotions, moist eczemas, etc. One to five per per cent. solutions were used in moist and papular eczemas, acne of the face, boils, and urethritis. Two and a half to ten per cent. solution in alcohol was used for the treatment of eczema, urticaria, sycosis, favus, psoriasis of the head and face; and two and a half, five, ten and twenty per cent. lanolin ointment for eczema, seborrhœa capitis, psoriasis and favus. Alumnol varnishes were used in papular and squamous eczemas. It was found that alumnol was efficacious in acute superficial inflammatory affections of the skin, as well as in chronic processes in which the inflammation was deeper; and in parisitic diseases (under which head the author includes erysipelas, favus, lupus, soft chancre, erosions and gonorrhœa); and in acute and chronic inflammations of the mucous membrane.

Changes in the Respiratory Organs in Carbolic Acid Poisoning.

Leon Wachholz reports two cases of suicidal poisoning with carbolic acid in which post-mortem examination showed, among others, changes in the respiratory organs. That carbolic acid occasions certain anatomical changes in these organs has long been known, but the explanation of such changes, however, has been unsatisfactory. To elucidate the question the author undertook a series of experiments on animals, from which he draws the following conclusions:

1. Carbolic acid is absorbed into the blood, whence it is violently eliminated by the kidneys, occasioning necrobiotic changes in those organs.
2. It affects the respiratory organs in the same manner as preparations of mercury do the bowels.
3. The course of the poisoning in man and warm-blooded animals differ in that, in the latter the period of excitation predominates, while coma and paralysis develop in man at the outset.—*Przeglad Lekarski.*

Water in the Treatment of Neuralgia.

Dr. Buxbaum first called the attention of the profession to this mode of treating neuralgia. He thinks that the hydrotherapeutic treatment of this disease has hardly received the attention which it deserves. In neuralgia of rheumatic origin it acts by inducing increased blood supply to the affected parts, and in the neuralgias following upon the infective diseases or due to intoxication by mercury or lead, it promotes the elimination of the poison.

He reports that in 83 typical cases of neuralgia this treatment was unsuccessful only in 10 per cent., whereas 60 per cent. were cured, and the remainder considerably relieved. The alternate application of heat and cold is most to be recommended. The patient is exposed to high temperatures, and afterwards cold applications are made. The alternating Scotch douche is particularly of service. Recent neuralgias may often be cut short in this way. Patients with sciatica treated without effect by various therapeutic measures, even including nerve stretching, have been cured in a short time by this method. If the neuralgia persists it is nearly always due to some irremediable cause, with the exception of some few cases open to operation. If a remission occurs after the treatment has begun, it shows the neuralgia is curable, and is therefore of prognostic value. In trigeminal neuralgia hydrotherapeutic measures applied to the whole body are the most suitable. Of course other indications should be attended to, such as anæmia, malaria, etc.—*Charlotte Med. Jour.*

Difference in the Actions of Pepsin and Pancreatin in Digestion.

Extensive experience has proved to the author that pepsin is indicated only in a very small number of cases of indigestion. If there be an insufficiency of ptyalin in the saliva, starchy substances will reach the stomach without being digested; pepsin will have no effect on it, whilst pancreatin—which digests twenty-five times its weight of starch—completely saccharifies it.

In stomachal digestion, pepsin can be active, but it is absolutely indispensable that it be in the presence of an acid gastric juice, which, in the author's opinion, occurs very rarely. If the pepsin be replaced by pancreatin, giving a dose of ½ to 1 gramme before meals, the latter, by virtue of its power of peptonizing thirty-five times its weight of albumin, will secure rapid and complete digestion of the albuminoids in the meals.

The action of pancreatin on fats cannot be doubted, since the pancreatic juice which contains it possesses the property of emulsifying and decomposing them. But it is necessary, to maintain its emulsifying power, that it pass the stomach without being acted upon by the gastric juice; it must, therefore, be protected against the acid of this juice.

The author states that in patients who had taken pills containing iodides with pancreatin immediately after their meals, the urine and saliva began to give an iodine reaction only six hours after the ingestion of the pills. Pancreatin contains three ferments: Amylopsin, which saccharifies starch; trypsin, which peptonizes albumin; and steapsin, which emulsifies and decomposes all fatty substances. Precreatin, therefore, acts on all food by the simultaneous action of its three constituents, and thus secures complete digestion. Moreover, it is indicated in enterocolitis; and in gouty persons, it is said to improve nutrition by modifying the products of digestion, and to cause cessation of attacks of gout and of glycosuria.—*Dr. Gombault* (*Gaz. des. Hop.*)

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ORIGINAL ARTICLES.

CLIMATIC CAUSATION OF DISEASE.*

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This subject, while one of the broadest in its scope, and dealing directly with the physiological effects of the medium in which we have our existence, is perhaps the least understood of all the questions bearing on the etiology of disease, and has received from investigators the smallest amount of attention.

The reason for this is at once obvious, for there are many barriers to the study of this question. It is a difficult task to collect statistics from which to study the causes of disease, especially in sufficient numbers to give reliable results. The causes of many diseases, however, can be studied from mortality statistics, of which there is a vast amount accessible. Where the disease is one attended with occasional fatality, the deaths furnish a basis for the study of this subject. When large populations are considered it is safe to assume that on an average the daily, yearly or monthly deaths from a disease will bear a constant proportion to the cases of sickness from that disease, and such being the case, very accurate studies can be made of the causes of those diseases from which deaths occur, for whatever aids in the cause will show its effects in the latter stages as well as in the first; and it follows that deaths should be more frequent with, or immediately following, those conditions of climate which tend to cause the disease. There are, however, objections to offer to this method, such as mistakes in the diagnosis of diseases and the irregularities in nomenclature. This, it is true, makes the question more complex and difficult to study, but results of sufficient accuracy can be obtained to lead to correct conclusions as to the relation of climate to the cause of disease. To accomplish even small results in this line requires years of hard labor, and that the investigator have both medical and meteorological training.

It is gratifying to note that some of our leading medical institutions are introducing meteorology in their carricula, and it certainly cannot be many years until medico-climatology will be recognized as of such importance that all first-class medical institutions will accord it a chair in their faculties.

We are taught that in the study and practice of medicine the end in view and the object to be attained is a knowledge of how to prevent, relieve and cure disease. The application of this admonition consists not only in the administration of medicines, but also in a thorough knowledge of all matters which influence the various morbid conditions to which the

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human economy is liable. There can be no doubt that of the many factors which contribute to help or hinder physical well-being a very large share must be attributed to climate understood in its widest sense, particularly to those conditions of atmosphere and soil which are constantly operating upon the human organism by day and night. The air breathed, its temperature, vapor of water, purity and pressure; the amount of sunshine received; the character of the winds; the nature of the soil; all have a potent influence upon the organism in health in causing or preventing disease, and still more potent is its influence upon the organism in its unstable and sensitive condition when already the subject of disease.

The position occupied by the physician in this respect is one of great responsibility, and notwithstanding the vastness of the subject it is attracting the attention of leading medical practitioners in all parts of the country. It frequently falls to the lot of the physician to select a climate for a patient, which determines whether or not life shall be prolonged and suffering relieved, and a mistake is fatal. During the ten years which I have been connected with the Weather Service in Texas, I have received a large number of communications from physicians in the populous centers throughout the country, looking for climates in which to locate their patients to the best advantage. Information concerning the prophylactic and therapeutic properties of this or that climate is being diligently sought. The conclusions which have been reached in regard to these properties of climate have, until within the past few years, been altogether empirical, and still are so in a great measure in so far as the profession is advised.

However, definite conclusions have been reached relative to the effects produced by climate on some of the more important diseases. By the study of the effects of different climatic conditions and changes on the different organs, from what we know of the physical effects produced by such conditions and changes, and the study of the relation of diseases to these conditions by the correlation and study of the vast amount of accessible facts, results are reached which are fast paving the way from empiricism to logical and sound conclusions. Some valuable though limited investigations relative to the climatic distribution of pulmonary phthisis in Massachusetts were made by Dr. H. I. Bowditch*, of that State, some years ago, from which he reached the conclusion that the disease was more frequent in low, damp localities than on higher land. Similar investigations† were made a few years later by Dr. G. Buchanan, of England, relative to the distribution of the same disease in that country, and he arrived at conclusions similar to those of Dr. Bowditch. It remained for Dr. H. B. Baker, Secretary of the State Board of Health of Michigan, to commence the study of the relation of climatic conditions to the cause of certain diseases, and while his work is devoted to the seasonal relation which exists as the cause, his results are of great value.‡ I have gone more minutely into this question,§ and have investigated the relation between the causation and fatality of certain diseases and weather changes which take place from day to day, as these appear to be of greater importance than the seasonal changes, on account of their suddenness and frequency which shocks the system even when in health; and I have also studied the causes for the climatic distribution of diseases.

To ascertain the climatic causation of disease, the physical effects produced by known climatic conditions and sudden changes in the weather on the different organs of the human economy must be understood, as well as the climatic influences which produce these effects. The Weather Bureau keeps the climatic record for nearly every locality, and with these conditions known, and also a knowledge of the diseases which prevail, the desired results can be obtained. Congress has made appropriations for investigations pertaining to climatology and sanitary science for the entire country‖, and there is no doubt but that much will be accomplished in this direction in the near future.

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*Med. Com. Mass. Society, Vol. X., No. 11, 1862.

†Tenth Report of the Officer of the Privy Council, 1867.

‡Annual Reports of the Mich. State Board of Health, 1886, et sequel.

§Special Bulletin No. 4, Texas Weather Service August, 1894.

‖An Act making appropriations for the Department of Agriculture for the fiscal year ending June Thirtieth, Eighteen hundred and Ninety-six; Weather Bureau, general expenses.

Temperature and moisture conditions of all climatic factors play the greatest parts in determining the healthfulness of a locality. The purity of the atmosphere is also an important factor, and one which must be kept constantly in mind. It is only the general relative purity of the air which makes this condition second to the preceding ones. The purity of the air for low levels depends in a great measure on the source from which the winds are derived. If they are continental they contain more or less impurities at all times; while, if they are oceanic, they contain chlorine and other antiseptic properties. The purity of the atmosphere increases rapidly with an increase in elevation. The amount of sunshine is of great importance in this respect.

In the investigation of this question there are some physical deductions concerning the capacity for moisture of the atmosphere at different temperatures, which must be kept in mind. From the meteorological tables of Guyot,* it is ascertained that a cubic foot of air at a temperature of Zero (Fahrenheit) can contain only 0.5 of a grain of vapor of water; at 32 degrees it can contain 2.13 grains; at 65 degrees it can contain 6.8 grains; at 95 degrees it can contain 17.14 grains; while at 98.5 degrees—the temperature of the body—it can contain 18.96 grains, nearly nine times the quantity which can be contained at a temperature of 32 degrees. Air at a temperature of 32 degrees and saturated with moisture (that is with 100 per cent. relative humidity), contains only one-fourth of the quantity of vapor of water which exists at 50 per cent. of saturation with the temperature at 95 degrees. Evaporation increases with a rise in temperature much more rapidly than it does with a decrease in moisture, which is due to the rapid increase in the capacity for moisture of the atmosphere with the increase in temperature as just noted. Evaporation from external surfaces of the body under average conditions carries off from the system through the skin a large amount of organic matter and water; such being the case a sudden fall in temperature, or an increase in the amount of moisture not accompanied by an increase in temperature, checks this action and increases the labors of the respiratory system, the kidneys and other eliminative organs, which, through any predisposition to disease or temporary weakness, often causes serious diseases. Any sudden weather changes are unfavorable to the successful treatment of most diseases, while in a few certain changes prove favorable. Decided change in temperature excites the nerve centers and, in exciting the vaso-motor center, disturbs the vascular system and causes the capillary vessels to become gorged and paralyzed, which is a cause for inflammation in the parts so affected.

Conduction of heat from the body to the atmosphere increases with the increase in the amount of vapor of water, and is an important factor in studying the effects of the temperature of the atmosphere on the body, both externally and internally. The range between day and night, and sun and shade temperatures produces marked effects on the human organism. These effects are most pronounced during the summer months when the differences between day and night temperatures, especially where there is much radiation, often amount to 50 or 75 degrees, and that between sun and shade temperatures amount to 40 or 50 degrees. After fatigue in the sunshine, when night comes on, or on retiring to the shade, a decided change in temperature is experienced. The difference shown by the thermometer between day and night, and sun and shade temperatures is not all that is felt; this is materially augmented by conduction where there is considerable moisture, and to these are to be added the cooling effects of evaporation. When the body has been exposed and forced to adapt itself to a high sun temperature and is suddenly transferred to a medium, with the temperature 50 to 75 degrees below the sun temperature and the organism is at rest, it is subjected to rapid cooling by the conditions just mentioned, which contracts the capillaries of the skin, interrupts the blood in the proper performance of its functions, and results in local or general congestion.

The effects which are produced by the differences in the capacity of air at different temperatures for vapor of water, are most marked on the respiratory system, for here we have not only to consider the external evaporation but, in some climates, the excessive internal evaporation. Air at moderately low tempera-

*Guyot's Meteorological Tables, 1859. pp 92-93.

tures (even not below 32°) when inhaled has its temperature increased to that of the body, 98.5°, or at any rate to within three or four degrees of this, and its capacity for moisture is greatly increased on account of the rise thus brought about. With an average of twenty respirations per minute (28,800 per day) and the amount of air taken into and expelled from the lungs at each respiration, 21 cubic inches, we have a total of 350 cubic feet of air used in respiration daily. Physiologists are generally agreed that the quantity of vapor exhaled from the lungs depends greatly upon circumstances, such as the rapidity of respiration, dryness or humidity of the atmosphere, and the activity of the pulmonary circulation. It is apparent, however, that the quantity of water given off from the system in the form of vapor in excess of that received during respiration depends almost entirely upon the temperature of the air inhaled. Assuming that the air leaves the body at a temperature of 98.5° and is saturated with moisture, it would carry from the lungs 6,636 grains of water in the form of vapor, daily. The important point in this connection is the excess in the amount of water exhaled from the lungs over that inhaled. For example, take a locality with the average daily temperature 32° during the cold months (there is a large area of the United States with an average daily temperature below this during some of the winter months), and the average relative humidity 75 per cent. (which is rarely exceeded), each cubic foot of air would contain about 5.1 grains of vapor. The amount of water taken into the lungs by respiration during a day under these conditions would be 1,758 grains, while the amount exhaled, 6,636 grains, shows an excess daily of 4,851 grains of water given off from the system through respiration over that received. The excess becomes greater as the temperature goes lower and less as it rises, while the per cent. of moisture remains constant. To furnish the complement of water between the amount inhaled and that exhaled, causes rapid evaporation to take place from the lining mucous membrane of the air passages and air cells of the lungs, where such weather prevails. The fluids from the pulmonary circulation, which normally keep the lining membrane of the lungs moist, contain more or less of the non-volatile salts carried in solution in the blood.* These salts are left as a deposit from the water carried out of the lungs during respiration, in quantities depending upon the amount of salts in the blood at the time, and the extent of the evaporation which takes place. Simple physical deductions give these conclusions, but they have been substantiated by analysis.†

In this connection we have the established fact that albumen will not pass through an animal membrane toward pure water, while it will pass to a solution of salt; and the more rapid the movement of the fluid the greater is the amount of albumen which passes through to the salt solution.‡ This being the case it results, when there is a deposit of salt on the mucous lining of the lungs, that exudation of albumen into the air passages and air cells of the lungs takes place.

Such I am inclined to believe are the exciting causes of pulmonary diseases, as they are favorable for the lodgment of the germs to which most of the diseases of the respiratory system are due; and it may yet be established that the lodgment and growth of these germs depend upon the extent of these conditions in the lungs.

In my studies of the relation of sudden changes and abnormal departures in temperature to the several diseases, from records in some instances covering twenty years I have obtained some interesting results. From the diseases which I have studied separately, which embrace more than a hundred and twenty-five, the following gives the greatest number of deaths and also shows a decided increase or decrease in mortality with certain temperature conditions with which we come in contact every day.

Deaths from pulmonary phthisis are 25 per cent. less on days with minus, and 38 per cent. greater on days with plus changes in temperature than on days with stationary temperature; and are 33 per cent. and 20 per cent. greater, respectively, on days with abnormally high and abnormally low temperature, than on days with normal

*The Causation of Pneumonia by Dr. H. B. Baker, Lansing, Mich., 1888.

†Medico-Chirurgical Transactions, Vol. XXXV. London, Eng., 1852.

‡Dr. Felix Hoppe, Virchow's Archives, Vol. IX. 1856, pp 245-268.

temperature. The greatest number of deaths from this disease always follows the occurrence of the lowest temperature.

Deaths from pneumonia are 75 per cent. greater with any decided change in temperature than with stationary temperature; and are 44 per cent. and 78 per cent. greater, respectively, on days with abnormally high and abnormally low temperature than on days with normal temperature.

Bronchitis gives a slight increase in deaths on days with minus changes in temperature; and they are 67 per cent. and 117 per cent. greater, respectively, on days with abnormally high and abnormally low temperature than on days with normal temperature.

Deaths from congestion of the lungs are 86 per cent. greater on days with abnormally low temperature than on days with normal and abnormally high temperature; and are 43 per cent. and 79 per cent. greater, respectively, on days with decided fall and decided rise in temperature than on days with stationary temperature.

Deaths from membraneous croup are 166 per cent. greater with either decided rise or decided fall in temperature than on days with stationary temperature; and are 200 per cent. greater with any abnormal temperature than on days with normal temperature.

In all diseases of the circulatory system quite a similarity is found in their relations to temperature conditions. Deaths are 100 per cent. and 55 per cent. greater, respectively, with sudden rise and sudden fall in temperature than on days with stationary temperature; and they are 10 per cent. greater on days with abnormally high temperature, and 10 per cent. less on days with abnormally low temperature than on days with normal temperature.

Deaths from the diseases of the blood are 50 per cent. greater on days with decided rise in temperature, and 30 per cent. less on days with decided fall in temperature than on days with stationary temperature; and are 50 per cent. greater on days with abnormally high temperature than on days with normal or abnormally low temperature.

From diarrhœal diseases deaths are 52 per cent. greater on days with decided rise in temperature, and 40 per cent. less on days with decided fall in temperature than on days with stationary temperture; and are 25 per cent. and 10 per cent. greater, respectively, on days with abnormally high and abnormally low temperature than on days with normal temperature.

From diseases of the kidneys deaths are less frequent on days with rising temperature and on days with abnormally high temperature, than on days with stationary normal temperature; are 158 per cent. greater on days with a decided fall in temperature than on days with stationary temperature; and are 80 per cent. greater on days with abnormally low temperature than on days with normal temperature.

Deaths from diseases of the nervous system are 30 per cent. and 18 per cent. greater, respectively, on days with a decided rise and on days with a decided fall in temperature than on days with stationary temperature; and are 52 per cent. greater and 30 per cent. less, respectively, on days with abnormally high and on days with abnormally low temperature than on days with normal temperature.

Deaths from typhoid fever are 38 per cent. greater and 10 per cent. less, respectively, on days with decided rise and on days with decided fall in temperature than on days with stationary temperature; and are 28 per cent. greater and 25 per cent. less, respectively, on days with abnormally high temperature and on days with abnormally low temperature than on days with normal temperature.

From malarial diseases deaths are 40 per cent. and 10 per cent. greater, respectively, on days with decided rise and on days with decided fall in temperature than on days with stationary temperature; are 30 per cent. greater on days with abnormally high temperature, and are 30 per cent. less on days with abnormally low temperature than on days with normal temperature.

Deaths from diphtheria are 75 per cent. and 135 per cent. greater, respectively, on days with a decided rise in temperature and on days with a decided fall in temperture than on days with stationary temperature; and are 150 per cent. and 68 per cent. greater, respectively, on days with abnormally high temperature and on days with abnormally low temperature than on days with normal temperature.

Deaths from old age are 50 per cent. greater on days with plus changes in temperature than on days with minus changes in temperature and on days with stationary temperature; and are 30 per cent. greater

on days with abnormally high temperature than on days with either normal or abnormally low temperature.

In considering the physical effects produced on the organism by the more important climatic conditions and the known relationships between climatic conditions and diseases, I have divided climate into three general classes, viz: Low, damp, *cold* climates; low, damp, *warm* climates; and high, dry climates. These features of climate are determined by latitude, by proximity to large bodies of water and by altitude.

A low, damp, *cold* climate is one where the altitude is small, and is of relatively high latitude; the temperature in winter is comparatively low, and the per cent. of moisture (saturation) is relatively great. On account of the low temperature in winter the amount of vapor of water present is small, which causes excessive evaporation from the mucous lining of the lungs as a result of the increased temperature of the air during the process of respiration. The relative humidity being high no evaporation of consequence takes place from external surfaces. The winds are generally continental and give an atmosphere containing more or less impurities. Sudden changes and abnormal departures in temperature are either more frequent or of greater effect in this character of climate than in the others. The diurnal range in temperature is generally great, and the conduction of heat from the body through the moisture medium, particularly during the warm season, is marked and adds to the effects of the temperature changes, and the differences between sun and shade temperatures reach their maximum. These conditions tend to cause certain diseases and to increase the fatality of others.

The excessive evaporation from the mucous lining of the air-passages and air-cells of the lungs, with limited external evaporation as a result of the low winter temperature and high relative humidity of this climate, combined with the sudden changes and abnormal departures in temperature, give the conditions which cause, or favor the cause of diseases of the respiratory system and, consequently, we find pulmonary phthisis, pneumonia, congestion of the lungs, pleuritis, bronchitis, and asthma more frequent in this climate than the others. Diseases of the kidneys are frequent, due to the high degree of saturation with vapor of water constantly present, and also to the frequency of sudden falls in temperature, either of which reduces the amount of water and organic matter eliminated through the skin, the former constantly and the latter spasmodically, and hence increases the elimination through the kidneys.

It can hardly be claimed that typhoid fever is caused by climatic conditions, yet these conditions either favor or prevent the development of the germ of the disease, and its fatality is increased or diminished by climatic changes. It is a summer disease, occurs at a season of the year when decided changes in temperature are more frequently rises, and abnormal departures are more frequently excesses, neither of which conditions are favorable to recovery from this disease, and both favor germ development.

The decided rises in temperature in this climate are unfavorable to diseases of the blood, as mortality from causes of this character is least on days with stationary and minus changes in temperature, and greatest on days with rises in temperature and on those with abnormally high temperature. Diseases of the circulatory system are always greatest where the most frequent decided changes in temperature occur, which is in low, damp, cold climates. Diarrhœal diseases are almost confined to the summer, and are most frequent in this climate on account of the extreme changes in temperature experienced that derange the functions and bring about more or less congestion, which is a factor in causing these diseases. Nervous diseases are frequent in this climate as a result of the sudden changes in temperature and the diurnal range which excite the nervous centers. Diphtheria is a cold weather disease and is most frequent in this character of climate. Malarial diseases are almost exclusively confined to low, damp, *cold* climates. The differences in temperature experienced in summer, under the conditions which exist in this climate, cause congestion and interrupt the blood in the proper performance of its functions, causing fever. It is probable that the micro-organism found in connection with this disease is caused by the effects of these climatic conditions

on the circulation. Old age suffers under this climate on account of the sudden changes which it bears poorly. The impaired vigor of circulation, assimilation and excretion, which characterize advanced years, and the special maladies most frequent at that time of life, such as rheumatism, cardiac disease, and renal affections, are all augmented by this kind of climate. The diurnal changes in temperature are unfavorable to the aged.

Low, damp, *warm* climates are those where the altitude is small; are sub-tropical, and marine influences tend to keep the temperature uniform and to remain comparatively high throughout the year; and there is a constant large per cent. of humidity (which with the high temperature means a large amount of vapor of water). Sudden changes in temperature are infrequent, and the range between day and night, and sun and shade temperatures is small. In this climate the evaporation which takes place from external surfaces is small, as in the preceding climate, but as the temperature is high and the amount of vapor of water large, the increase in the temperature of the air taken into the lungs is small and consequently the increase in its capacity for moisture is small. The evaporation from the mucous lining of the lung is small; the residue of salts and the conditions favorable for the exudation of albumen are all lessened where the temperature during the greater part of the year is not far below that of the body and the per cent. of moisture is constantly great. This climate may have either prevailing oceanic or continental winds, and much of its sanitary characteristics depend on these. The meteorological features of marine climates, while they have many in common, some of the most important characteristics are determined by the prevailing winds and the latitude. Here the climate is charged to a greater or less extent, depending upon the amount of oceanic winds, with chlorine and saline matters which act in the capacity of strong antiseptics and disinfectants. As regards the physiological action of sea air upon the healthy organism, the marine climate is usually tonic, tending to promote the processes of nutrition and assimilation, and is at the same time sedative in character. It is the most exhilerating of all climates; and while it aggravates some diseases, is generally prophylactic. It is unfavorable to those suffering with diseases of the kidneys on account of the large amount of moisture constantly present, which throws the increased elimination of water and organic matter upon these organs; it however possesses advantages over the low, damp, *cold* climate on account of the less frequent decided changes and abnormal departures in temperature. The conditions which prevail in this climate may be summed up as, in a great measure, preventive in effect upon the diseases of the digestive organs, particularly when the trouble is with the stomach and bowels, but where the liver is involved its effects are unfavorable, and its tendency is to cause diseases of this type. Cutaneous diseases are excited by the large amount of moisture charged with irritating salts; most cases of rheumatism are benefitted except when of an inflammatory character; pulmonary phthisis and other diseases of the respiratory system are not aggravated and, as a general rule, the small temperature changes and other climatic conditions are favorable to their treatment, the antiseptic effect of the chlorine is a potent factor, particularly in phthisis. The generalizations reached by Drs. Bowditch, Buchanan and others, to the effect that pulmonary phthisis is most frequent in low, damp localities, will not apply to this character of climate, for here we find a relatively small mortality from this disease, being only about one-half the average, as given by the best authorities, for the world.* This climate is beneficial to those who are debilitated from overwork or long continued strain apart from actual illness. The equable and bracing conditions are very favorable to young and growing children, and promote healthy and normal physiological development. The equable and moderate warmth, combined with its sedative influences and its properties of stimulating tissue change and the riddance of morbid deposits, make it very favorable for the aged, and life is prolonged far beyond the average under such a climate. I have found in my investigations in different climates that the number of people who die at advanced age is greatest in this character of climate. The conditions are

*Flint, Practice of Medicine, 6th edition, page 195, gives the average deaths for the world from this disease one-seventh of all deaths, while here it gives one-fourteenth.

such as to give the greatest vigor of circulation, assimilation and excretion, which the aged so much need, and which benefit the young.

High, dry climates are those of considerable elevation, and, on account of the elevation, are comparatively cold, particularly at certain seasons. Prof. Dr. J. Hann has determined that one half of the vapor of water of the earth's atmosphere is below an elevation of 6,000 feet, and eight-tenths is below an elevation of 10,000 feet.* The percentage of saturation is small; constant evaporation takes place from the external surfaces of the body, and a large amount of the non-volatile salts as well as organic matter in the system are carried away through the skin. This leaves the amount of salts which may be deposited on the mucous lining of the lungs considerably reduced, and besides this, even with low temperatures at high elevations, the evaporation caused by the increase in the temperature of the air inhaled, is not great because of the decreased capacity of the atmosphere for moisture in elevated regions. The organs of the body at high elevations adapt themselves to the conditions which surround them, and the capacity of the air inhaled for moisture is the same for the same temperature in the lungs as externally. Very little evaporation takes place from the lining membrane of the lungs, consequently there is very little if any deposit of the non-volatile salts; first, because of the excessive evaporation from external surfaces and, second, on account of the small internal evaporation. At high elevations there is at all times a large proportion of sunshine, with its deoxodizing and purifying effects. The conduction of heat from the body through the agency of moisture is at a minimum, even at the most extreme season. Decided changes in temperature are frequent and the diurnal range is generally large, but these are not magnified by the conduction of heat from the body as in low, damp, *cold* climates, and consequently the effects are at a minimum for the difference in temperature recorded. These climatic conditions present very few of the features which aid in the development of the diseases of the respiratory system; the conditions which favor the lodgment and growth of the micro-organisms in the lungs are not developed. This is the most favorable climate for the treatment of lung diseases, except in cases complicated with nervous troubles which would receive the greatest benefits in a low, damp *warm* climate of the extreme type. Diseases of the nervous system are aggravated by the decided changes in temperature which take place; diseases of the kidneys are in a great measure prevented by this climate; inflammatory rheumatism is generally improved. This climate is severe on old age on account of the sudden changes, and also the cold during the winter season which depresses those in whom the circulation is feeble; it develops a quick and nervous disposition in the young, and is unfavorable in cardiac troubles on account of the sudden changes and the large diurnal ranges in temperature.

In the middle-aged, when the system is in a normal condition the organs readily adapt themselves to climatic changes, but with the child and the aged, as well as those who are afflicted, changes of climate should receive careful consideration. Those who are subjected to conditions of climate which tend to cause disease should use every precaution to counteract the effects by proper clothing and diet, as well as the use of medicines, and also by avoiding the unnecessary exposure, more or less of which is witnessed every day.

Texas presents each of the three conditions of climate, in well defined types. The Northeastern portion of the state has a medium of the low, damp, *cold* climate. The immediate coast region presents the most perfect class of the low, damp, *warm* climate, where temperature changes and departures are slight, and rarely excessive or abnormal. The winds for ten months of the year are, except with occasional interruptions, from the Gulf of Mexico, and are from the same source for more than one-third of the time during the remaining two months of the year. There is a large amount of sunshine throughout this district, notwithstanding the heavy precipitation over the Eastern portion. The elevated regions of Western Texas are a good type of the high, dry climate, and a medium of this character of climate. All Texas, except the extreme West, has for eight months in the year a South wind from the Gulf of Mexico, which carries coolness and comfort at the very season when cool-

*Distribution of Aqueous vapor of the Atmosphere with increase of Altitude, Zeitschrift Qest. Met. Gessell, 1874, pp 193-200.. IX.

ness is most needed. *This, as already referred to in connection with the coast district, plays an important part in Texas climate; it gives the coast region one of the most perfect of climates in so far as healthfulness is concerned; it makes the Northern portion of the state one of the mildest of the low, damp, *cold* climates, and carries its salubrious effects far to the westward over the high, dry climate of that part of the state.

The distribution of diseases in Texas conform closely with the climatic conditions which influence the causation of disease, as discussed in this paper. Certain diseases of the respiratory system—pulmonary phthisis, pneumonia, pleuritis, bronchitis and asthma—are most frequent over the Northern portion of the state and decrease in concentric circles with the Northeastern corner as a center towards the Gulf and the elevated regions of West Texas. Diseases of the nervous system are most frequent over the Northeastern portion of the State; are some less over the Northwestern portion, and are least frequent over the immediate coast region. Diseases of the kidneys are most frequent over the Eastern portion, with a slight decrease Southward, and a marked decrease toward the West. Diseases of the digestive system are most frequent over the Northeastern portion, and decrease toward the South and West. Cardiac troubles are least frequent over the immediate coast section, and are most frequent over the Northeastern portion. Malarial diseases are confined to the Eastern portion of the State, but are seldom met with along the immediate coast.

HYSTERIA: CEREBRAL MANIFESTATIONS.

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Hysteria, misnamed, ill-defined, capricious and fleeting, has long been the subject of medical thought and inquiry, and yet to-day remains well nigh as imperfectly understood and as indefinite in its pathology as ever. Its nature, habitat, causation and successful treatment are still elusive—irritatingly, exasperatingly so. It is known to require for its production a certain type of organization, yet the physical features of this type, the physical basis of the disease, are still but vaguely outlined. In its essence it is a morbid state of the brain. It is essentially a morbid state rather than an active disease. It is an abnormal type of structure, a morbid functionating tendency, which either in itself may constitute the disorder or be superadded to active diseased processes. It has a connection with the uterus only in name, no further. The brain is its habitat and the nervous system the field of its active operations. The type of brain is its essence and furnishes its potentiality. Frequently if not inherited, it is found in individuals in whose organization there is a preponderance of the emotions, a want of mind equilibrium, a development of sentiment and the affective propensities at the expense of capacity to deliberate and choose. The disease is most active in the sex whose place in the economy of nature and whose work in the perpetuation of the race necessitates a preponderance of emotional development. It is seen perhaps twenty times more frequently in women than in men. All degrees of its development may, however, be seen in man and in as multitudinous variety. The type of such men is womanish in emotional development and lack of mature deliberation. It is most active at that age that is accompanied by the greatest degree of instability of nervous tissue, viz., the period of its most active growth and development, the period of pubescent and adolescent change. Fully 75 per cent. of all cases (Gowers) show the first active symptoms between the ages of ten and thirty years, and almost one-half of these begin between the

*Texas Monsoons, by Prof. Mark W. Harrington, Chief of U. S. Weather Bureau, published in Bulletin of the Philosophical Society of Washington, Vol. XII., pp 293-308.

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ages of fifteen and twenty years. Being in its essence a developmental peculiarity of the nervous system, and particularly of its central organ, the brain, it naturally has such relation to other disorders of the system as the nervous system has to other tissues and organs of the body. An imperfectly or peculiarly developed nervous system will almost inevitably be the cause, or at least the accompaniment, of imperfect development elsewhere.

The organs of reconstructive metabolism are often imperfectly developed in the same individual. The capacity to assimilate nourishment is limited, and there is a want of stored up reserves of nutritive material. This limited recuperative power is particularly marked in the central nervous system. The nervous elements are readily exhausted and do not readily recuperate.

So also are the organs of life reproduction often defective, and it is this fact that, to my mind, has led to the belief in some mysterious connection between diseases of the sexual system and the manifestations of hysteria, and that has ascribed the development of the latter to diseased conditions of the former. The truth is they are both evidences of the same dyscrasia, and, as the nervous system stands in the relation of a stimulant to the development of the other tissues and organs of the body, it is oftener true that structural defect in it is the origin of the structural peculiarity or deficiency in the sexual apparatus. Still oftener it is doubtless true that neither has any causative relation to the other. In fully one-half of all cases of hysteria there is no active disease of the sexual organs of any form or degree, and in many of the remainder the disease is an incidental one, one that has no causative relation to the hysterical phenomena, and whose removal will not materially influence their progress. In a few cases there is unquestionably reflex irritation from local disease here and elsewhere, whose removal may very favorably modify or wholly remove active hysterical phenomena, but these are, after all, the exception and not the rule. Laryngeal catarrh may accompany and influence the development of hysterical aphonia, a hysterical joint may be the outgrowth of arthritic inflammation, and so may hysterical symptoms of the sexual system be accompanied and even determined in character by gross disease in some part of this system, but it would be just as philosophical and just as effective to attempt to cure the hysterical state, of which purely functional aphonia is the expression, by ablation of the larynx, as to hope to cure it by removal of the uterine appendages when its manifestations are seen in functional derangement alone of these organs.

The brain manifestation of hysteria may be divided into two general classes. The first is that class in which the brain disorder is simply a predisposing but necessary factor in the development of the phenomena of the disease. The active symptoms are alone seen in disordered function of some other organ. There is a nervous dyspepsia, a hysterical joint, aphonia, ovarian tenderness, cardiac disturbance, or some disordered function of some special sense. In these the active symptoms are the disorder of the special organ, but the primary and essential element in the development of the disease is, after all, the peculiar brain state of the individual. In this sense the hysterical manifestations of the brain include all hysterical manifestations in all other organs, and, strictly speaking, there can be no hysterical symptoms of any organ without a morbid brain condition accompanying it.

Disorders of the special senses, anesthesia or hyperesthesia of the nerves of smell and hearing especially; sudden blindness, contraction of the visual field, variations in the color sense, loss or perversion of taste, or actual hallucinations of these senses; hyperesthesia or anesthesia of the fifth pair, face ache, tic convulsif, affections of the vagus, spasm or paresis, aphonia, spasm of the glottis, accelerated or diminished respiration, loss of speech, palpitation, disorder of digestion, esophageal spasm or paresis, vomiting, local anesthesias or hyperesthesias over various areas of the body, joint contractures or joint pains, paralysis of spinal origin, ischuria or polyuria—this is a simple enumeration of a few of the forms that these secondary symptoms may take. In the limits of this paper we cannot do more than partially enumerate them. The chief point to remember is that these may be purely hysterical or be complicated with actual organic disease. In the latter case the local disease probably determines

the direction of the hysterical manifestations, but does not originate the state of the brain of which they are the local expression. In every such case, however, all disease should be looked for carefully and every test of its presence exhausted. Never dismiss any case with the assumption that it is nothing but hysteria, because hysterical symptoms are present. The type of brain is one feature to be considered, the presence or absence of organic local disease superadded to this is another element just as important to the well-being of the patient. They may coexist, and the presence of of one should never lead you to exclude the other.

We turn now to the second division of the subject, viz., hysterical manifestations limited to the brain functions directly. These may be divided into two classes, the psychic and the somatic phenomena. The former are probably more frequent and more prominent, although the latter accompany many forms of brain disease. The psychic phenomena accompany many forms of mental disorder. They are almost uniformly present in pubescent and adolescent insanity, often in the insanity of pregnancy and of the parturient state, and in all forms complicated by sexual perversion or excitement. The hysterical manifestations are superadded to the insanity, and by no means constitute the disease. Time after time I have found it necessary to correct the impression that because hysterical symptoms were present the disease was simple hysteria, and within the patient's control. Mental derangement does seem in some instances to grow out of the hysterical brain manifestations by gradual steps where it did not before exist, and the dividing line between them is sometimes hard to determine. There is no rule by which the question can be decided. The point where a structural peculiarity develops into active disease, when we have nothing but the disordered function to guide us, is hard to determine. In hysteria major there is always a time during the progress of the fit when the patient is unquestionably insane, although temporarily so. There are often hallucinations and delusions, delirium with maniacal violence and storms of emotion. Acute melancholia is not infrequently complicated by hysterical phenomena, especially when occurring in young people, and it is well to bear this in mind. I have known suicidal impulses to be overlooked because the patient was believed to be simply hysterical. Hypochondriacal melancholia is very frequently accompanied by hysterical symptoms, and it is often extremely difficult to differentiate the symptoms of the two disorders and to refer each class to its proper origin, to distinguish those arising from the peculiar brain state from those due to actual local organic disease. Delusions relating to particular organs or functions may have an origin in actual organic disease of these organs, and yet the patient may much exaggerate the consequent disorder, magnify its importance and present the well-known features of the hysterical state. The self-consciousness of the hypochondriac is very similar to the self-absorption of the hysterical, and it is often impossible to distinguish between them. Speaking generally, we must look for the proof of hysteria in the state of the individual outside of the symptoms connected with the local disease. The fact that hysteria is a general state rather than a local disease will assist greatly in the indentification of its symptoms in all forms of mental disorder.

Outside the domain of strictly psychic disorder there is scarcely a disease of the general nervous system that hysteria may not complicate. As the patient approaches puberty, infantile hemiplegia, cerebral tumors, tubercular meningitis, multiple neuritis, chorea and epilepsy are frequently complicated by such well-marked hysterical phenomena as aphonia, phantom tumor and hysterical convulsions. This fact renders a correct diagnosis extremely difficult in some cases, and it is only by comparing the symptoms present with the evidences of the organic basis for them, testing their reasonableness and regularity and putting them to the proof, that the correct conclusion can be reached.

It cannot be necessary to discuss before this society the well-known symptoms of hysteria. They are either continuous or paroxysmal. They simulate every known disease and usually pattern themselves after such as are within the experience or observation of the patient affected. Imitation is one of the chief sources of the phenomena of the disorder, and faulty imitation is our chief diagnostic weapon. Inconsistency at some point in its manifestations with what they pretend to be is

their predominating characteristic. The rationality of their evolution must be the test of their character, and we must therefore call to our aid every law of the symptomatology of the known organic diseases and compare these phenomena with them. These laws must be our arbiter.

The pathology of hysterical manifestations of the brain, as has already been said, is very indefinite. It is, however, an interesting question, and, in the light of recent investigations into brain histology and the pathological anatomy of the acute insanities and of the study of the fatigue of nervous elements, it is beginning to assume a basis a little more definite than mere conjecture. At the risk of incurring the ridicule of our surgical friends, who believe only what they can see and feel, or think they do, I shall attempt an outline of my idea of the pathology of this uncertain symptomatology.

The doctrine of the neurons, as the essential anatomical basis of all nerve and mind activity, is becoming as well established as we can well hope such a difficult problem as the relations of psychic phenomena to physical elements to admit. Neurons are the true nervous elements in nerve tissues, and are made up of nerve cells and their connections. These are grouped into complex structures by association and commissural fibres, forming "groupings and clusters of cells, complexes of associated unilateral and bilateral clusters," as they have been termed.* Bear in mind, now, that this is not theory. The researches of Golgi and Ramon y Cajal, of Andriezen, Bevan Lewis and Batty Tuke, of Meynert, Obersteiner Fritsch and Hitzig have fully demonstrated the anatomical relations of the nervous elements as far as we shall attempt to describe them here.

The brain cortex is divided dynamically and functionally, rather than by the shape or size of cell elements, into three or four layers; the first, immediately beneath the pia mater, is the molecular; the second the ambiguous; the third the layer of large pyramids, and the fourth the polymorphous. The molecular layer has risen much in importance through recent investigation. In Meynert's time it was supposed to be composed in great part of basis substance and connective tissue. Now not fewer than ten different structures can be discovered in it. With the ambiguous layer beneath, it receives the distribution of the terminal filaments of the upward projection system, the sensory fibres from the special senses, the integument and the soma in general, coming, of course, through the filet, the olfactory and optic radiations, and the sub-centers of cell elements in basal ganglia, bulb and cord. On the other hand, the apical tufts from the large pyramids of the third layer beneath reach upwards, and spreading out encompass the nervous elements in these two layers from below, while the basal processes of these large pyramids are connected with discharging lines outward. This anatomical basis, when comprehended in all its complex detail, affords ample mechanism for all forms of nerve activity that result in movement and conduct. The complexes of cortical neurons are so disposed as to receive all the incoming nerve currents of sensory origin, and to "elaborate from these sensations still more complex," ultimately "attaining to such physical states as we denominate cognition and recognition, comparison, discrimination and judgment, and which finally issue as the reactions of conduct."* Andriezen, an assistant medical officer at the West Riding Lunatic Asylum, in England, has recently given a series of demonstrations of anatomical and pathological specimens from slides prepared by himself that fully corroborate these statements. Clouston, medical superintendent of the Royal Edinburg Asylum, Scotland, has also presented a most interesting series of slides showing the incipient cell and vessel changes in the primary stages of mental disease and in those more advanced. The forms of disease in which these were found were also described, and a rational relationship established between symptoms and pathological change. For instance, the primary change in the brain cell is shown by a swelling and an increase in the staining of protoplasm, nucleus and processes by the reagent, and these changes are connected with the stage of increased cell activity, as in the incipient stage of paresis or epilepsy. As the pathological process advances, the cell shows pigmentary or granular degeneration, diminished staining of protoplasm, nucleus and processes, and a complete de-

* Andriezen, Journal of Mental Science, October, 1894.

*Andriezen, Brain, Winter, 1894.

struction of the more delicate of the latter, and these changes are connected with such symptoms as amnesia, incapacity for attention, easily induced fatigue, insomnia and muscular weakness and tremor.

The theory of normal fatigue, psychically meant, and cell recuperation, is also worthy of a moment's notice. The brain cell, or neuron, receives its restorative elements from two sources—from the intra-cellular nutritive material, stored up during sleep and available during waking hours, and from the lymphatic food material circulating in the lymph, and capable of use only at a certain fixed and comparatively slow rate. When this stored up nutriment is consumed a psychic sensation of fatigue ensues; the individual rests and the store is replenished. In diseased states, or during the circulation of alcohol in the blood, for instance, the cells cannot rest, but are spurred on to a degree of activity which, in its inevitable consumption of substance, results in excessive fatigue, exaggerated in the same degree that the stimulation was excessive. This is morbid fatigue, such as impairs the capacity of the cell to recuperate by the assimilation of nutriment when opportunity does present, a state very similar to that seen in the neurasthenic, and a condition that is present in many cases of hysteria. The cell structures in the hysterical are readily exhausted. They can not withstand any extraordinary demand on them. Nerve cells must be considered to have an individual variation as well as any other organs in the body. Neurons have a three-fold character, as nutritive and doubly connected elements. They must be capable of recuperation and the conversion of nutrition into stored up energy; they must be able to receive impressions and capable of the regulated discharge of this stored-up energy. The activity of these neurons consists in an excitation, rise of tension within the cell, and discharge with reduction of tension, and this is the nervous basis of what, psychically, we call a sensation. Now, this excitation may be faint or vivid in intensity, and the neuron upon which it is projected may respond readily or slowly. In the hysterical state there is a quick excitation and an explosive discharge. The mechanism, while unduly sensitive, readily excited by impressions reaching the cell from without, cannot store up the energy so imparted to it, but it is released readily and without due rearrangement.

This variation in the reception of sensations and the discharge of energy consequent upon it, is similar to the pathological change in the incipient form of disease of these structures, where it has been shown that swelling and softening of the fine connecting fibres between nerve cells—the very first changes that can be detected in the alcoholic, for instance—is correlative with diminished sensitiveness to impressions and the slowness of reaction time in such subjects. In the one instance we have a form of cell structure that does not admit of high or fixed tension, but releases energy fitfully and without order; in the other there is a slowness in the rise of tension in the cell because the store of nutrition upon which it should call is not within its reach, or the line of its functional stimulation interrupted. Combine these two conditions and you have, to my mind, the pathological basis of the hysterical state. There is in it a cell structure such as we have described, and there is often superadded an excessive fatigue that comes from the failure to adjust the excitation of the nervous elements to their supply of nutritive material.

The treatment of hysterical manifestations of the brain requires nothing peculiar. The indications are rest—as complete rest as is possible of the exhausted nervous elements,—and the supply of proper nutritive material. This involves proper adjustment of the environment, the removal of all sources of undue strain or any exaggerated demand on the system, the diversion of cell activity to other portions of the nervous mechanism, the removal of all undue excitement, reflex or otherwise, and the use of every restorative agency within our control.

Locomotor Ataxia.

Dr. Sydney Kuh concludes (*Chicago Med. Rec.*) that the brain is diseased in the majority of, and probably in all cases of locomotor ataxia, that quite a number of the most constant symptoms of this disease are very probably and some of them surely not of spinal but of cerebral origin, and that locomotor ataxia is certainly not merely a spinal but rather a disease of the entire central and peripheral nervous system.

IS CANCER OF THE STOMACH AND ABDOMINAL ORGANS THE MEDIATE CONSEQUENCE OF A CONTUSION?*

DR. LITTAUER.

September 1, 1887, a beer wagon collided with a horse-car, swinging the brake against the chest of the driver, L., who was thrown from the platform. He complained of pain in the chest and formication in the feet and right hand. He was taken to a hospital, ice-bags were applied, and September 7 he was discharged improved. He was at this time 29 years old, and had been in good health for some time, though, taking advantage of the presence of a physician to prescribe for his child a few weeks previously, he had asked advice with regard to some digestive disturbances which the physician considered gastric catarrh.

November 30 the railroad physician certified that he had suffered a contusion of the chest and, in consequence, a shock of the general nervous system.

August 2, 1888, the same physician testified that the gait and speech were uncertain and the latter slow; that the patient was dull and the countenance imbecile; that he was incapacitated for work, and had chronic gastric catarrh, the lungs having suffered from the contusion. From August 14 to September 10, L. was treated in a hospital with thermal baths. The diagnosis was confirmed, with the additional note of apical catarrh of the lungs. On December 1 the railroad physician certified that the condition was on the whole unchanged, and advised treatment at the Charity, to which the patient was admitted January 7, 1889, and where he remained till March 9, 1890.

At least three physicians examined him at this hospital and agreed in this diagnosis already made. Digestive disturbances were noted, though not in detail. During two months of the fall of 1889 the patient had treatment at the Medico-mechanical Institute of Berlin but without improvement, as attested by the physician in attendance.

December 3, 1889, there were noted poor sleep, hebetude, vomiting of mucous when lying on the back, and a disposition to cry. After January 16, 1890, treatment was directed especially toward the digestive symptoms.

After leaving the hospital, L. was sent to the country, but did not improve, and on July 31 the physician at the Charity certified that he did not consider further sojourn in the country, or other therapeutic measures as likely to cause improvement. In October, 1890, he recommenced treatment directed toward the gastric disturbance.

December 20, 1891, Dr. L., the physician at the Charity certified, that the condition was, on the whole, the same, the patient being anæmic, badly nourished, with tenderness in the gastric area and with renewed pulmonary catarrh. He thought that, while the prospect for genuine improvement was slight, it was possible that the patient might become able to do light work after prolonged dietetic treatment with occasional lavage. On his advice, L. was admitted to the Augusta Hospital January 18, 1892, where he remained till March 22. On his discharge it was stated that he had a chronic gastric disorder and was improved. Professor Ewald, however, on April 18, 1892, certified that improvement had not occurred. In contradiction Dr. L. again certified, May 4, 1892, that a marked improvement had occurred, the color of the face being healthy, the tongue clear, the physical powers increased while the pulmonary catarrh had subsided. In opposition to the physical evidence, L. complained of severe pains in the stomach, of disturbed digestion and great weakness. Dr. L. thought that the patient was simulating or exaggerating his symptoms, and considered him fit for light work, indoors or out. Another physician, on August 6, 1892, certified that L. was completely broken down, his nutrition was miserable, his complexion grey, he also noted hebetude, hyperæsthesia of the skin and phy-

*Translated from the Quarterly of Forensic Medicine and Public Sanitation for April, 1895, by A. L. Benedict, A. M., M. D., Lecturer on Digestive Diseases, Buffalo Dental College.

sical depression. September 9, 1891, L. was again received into the Augusta Hospital where he remained until September 20. The assistant physician noted severe pains in the gastric area and loins, as well as marked sleeplessness.

November 11, 1892, the physician who had given the certificate August 6, noted that emaciation had been progressing for some time, that a malignant neoplasm had developed in the intestine of plainly carcinomatous nature, and that the patient could live but a short time. On November 28, he certified that the cancer had no causal relation with the accident of September 1, 1886. The patient died the next day.

Autopsy.—Atrophy of the fatty tissues of the heart, brownish-red muscular tissue, whitish opacity of the endocardium of the left ventricle, upper lobe of right lung distended with air, emphysematous at margin, four liters of serous fluid in the pelvis, numerous large cancerous nodes on the peritoneum, right kidney adherent with surrounding structures through chronic inflammation of cancerous nature, kidney of normal size, pyramids partly atrophied, so that their place was taken by "gulfs" (hydronephrosis); all the remaining abdominal organs more or less firmly united by cancerous growths; diaphragm riddled with cancer and forming a membrane one c.m. thick adherent to the entire upper surface of the liver; cavity of the stomach much diminished in size; complete cancerous degeneration of pyloric area and vicinity of the great curvature; cancerous growths of the peritoneum covering its surface and uniting it to the whole posterior surface of the stomach; pancreas infiltrated with cancer, numerous cancerous nodes of different sizes on the intestine; mesentery and great omentum, lowest part of rectum, to a length of 10 c.m. thickened with cancer so as to form a firm tumor.

Lengthy opinions follow from the physician in attendance and from a Prof. F., reviewing the history in detail and attempting to show that the accident had no causal connection with death, either immediately or mediately. The examination was undertaken at the request of the Imperial Insurance Officer.

The opinion of the writer differs from that of Prof. F. in assigning an indirect causal relation to the original accident. Cancer is at first a local disease as is admitted by both those who consider it a dyscrasia and by those who consider it a germ disease. In the light of modern discoveries, even though we do not know the exact cause of cancer, it seems that a relation can be established between injury and malignant disease. According to Langerhan's Compend of Pathological Anatomy, 1891, a chronic inflammation of an organ or part of an organ, has an ætiological significance in determining the development of cancer. It has been repeatedly observed that from a scar the result of injury, or from an old ulcer of the lower extremities, or a chronic gastric ulcer, cancer has developed. Cancer of the lip predominates among men who smoke pipes, the so-called chimney sweepers' and parafine workers' cancer arises in the same way from definite, repeated, mechanical injuries, and in the digestive tract, the localities of smallest calibre and the transitions of mucous membrane are by preference attacked by cancer. In the latter locations, (Rindfleisch) the brunt of mechanical impact is physiologically borne.

Waldeyer expresses himself as follows: "I have always noticed in my examinations that, in the most recent zone of a cancer, there is almost as rich vascularization of the tissue, with aggregation of colorless blood vessels as occurs in inflamed tissue. Can it not be that the increased nutrition of the tissue and the resulting sponginess of the connective tissue substratum prepare the way for the growth and extension of the cancer? Can not, in the same way, chronic inflammatory processes of local nature, for example, repeated inflammations, finally pass over into carcinomatous degenerations?"

The late professor of surgery in Heidelberg, Professor Weber, said: "All things considered, the heterologous neoplasms probably often arise as plainly local diseases from repeated inflammations of not very high degree, without our being able to make a positive diagnosis."

The utterances of Billroth are also instructive. His pupil, Alexander von Winiwarter, quotes him thus: "In most cases the exact cause for the development of carcinoma are not known, but a whole series of observations exists confirming the appearance of cancer following local irritation, the new growth developing in soil already altered by a pathological process.

I myself have noticed a local inflammation at the point of development of carcinoma in twenty per cent. of all cases. I may note as examples of the development of cancer from irritated localities cases in which carcinoma has occurred on the site of an ulcer that has matterated for years, in a sinus, a fistula, in chronic inflammatory foci. . . . Single or repeated traumatic irritations can, under certain circumstances, afford an impetus to the development of cancer."

Professor Gusserow, without reference to theoretical considerations, speaks as follows: "Various local diseases of the cervix uteri appear to be of the greatest significance as predisposing causes to the development of cancer. In this category belongs long continued catarrh of the cervical mucous membrane, with the formation of erosions."

Professor von Ziemssen, referring to the occurence of cancer of the larynx, says: "The cause is quite obscure. In only one case out of ninety-six traumatism—fracture of the thyroid cartilage through an attempt at strangulation—had preceded neoplasm by a few months."

Stoerck of Vienna contributes a case of cancer of the epiglottis in a man fifty-two years old, in which the patient attributed the trouble to swallowing a fish bone. The bone had remained for a long time before it could be grasped.

Of the symptoms of laryngeal cancer, hoarseness is by far the most constant, the earliest and the most permanent. According to von Ziemssen, hoarseness preceded other symptoms by many years, for example, three, four, five, and, in one case, twenty-six years. A prodromal stage of one or two years seems to be the rule. Do not these facts signify that chronic catarrh of the larynx precedes cancer and conduces to its development?

Professor Luecke says: "I believe by all means that we have every reason to inquire for the local inflammations that engender tumors. They possess real ætiological moment with respect to the development of tumors, yet they cannot be of immediate diagnostic value because certain inflammations do not always call forth certain tumors. Repeated as well as single irritations by pressure, friction, or the flow of secretions are given as the causes for the most various benign and malignant tumors.

After weighing carefully the testimony of Professor F., and again referring at length to the history of the patient L., the writer reached the following conclusions:

(1) By the accident, on account of the contusion of the chest and gastric area by the brake, processes were originated through which, in course of time, cancer could develop in the stomach and neighboring internal organs.

(2) In the documents no account is taken of processes or anatomical changes from which one can decide upon an idiopathic origin of cancer in L.'s case.

(3) By the continuity of the processes from the moment of the blow of the brake on the anterior chest wall and gastric area to the death of L., it is highly probable, from a medical standpoint, that a mediate causal connection obtained between the accident on September 1, 1887, and the death of the patient. The degree of probability cannot be stated mathematically, but, to myself, this probability amounts to a certainty.

Obstruction of the Bowel Tested by Electricity.

Althaus (*British Medical Journal*,) reports a case of a man fifty-four years old, who for three months had suffered with obstinate constipation. At the time of coming under observation the bowels had not been moved for ten days, and the abdomen was distended and tender. The appetite was lost, and a condition of collapse existed, with sunken face and small, feeble pulse. The introduction of the long tube proved unavailing, and electric treatment was resorted to. An insulated sound with a fine metallic end, was introduced nto the rectum, and a moistened conductor applied to the abdominal parietes, chiefly in the region of the sigmoid flexure. Through this circuit a primary faradic current was passed, and its force gradually increased until the patient experienced a decided feeling of vibration in the bowel. In the course of the day a copious intestinal evacuation ensued, with wonderful relief to all the symptoms. During the next two days the bowels acted ten times, and in the course of a week the patient appeared quite well.

A second case, in a woman fifty-seven years old, is cited, in which a like result was obtained from similar treatment. (*The Medical News.*)

MALARIAL HEMATURIA.

CHAS. E. CATCHINGS, M.D., WOODVILLE, MISS.

To my mind there is no disease on earth so much dreaded by the inhabitants of malarial districts as this "Monster Hematuria." It may be defined as a miasmatic acute infectious fever; characterized by an initial chill, with manifestations of an inflammation of the whole kidney structure, especially in the mucous membrane, which is as pathognomonic as is the membranous deposit upon the tonsils and fauces in diphtheria. It attacks the white man, especially the laboring class, more often than the negro, who is capable of taking it on and throwing it off without any deleterious effects. It prevails throughout the whole southern climate, especially in localities abounding in lakes, stagnant water courses, swamps, etc., which are conducive to vegetable decomposition and miasmatic fevers. There are probably as many forms of this type of malaria as there are pernicious forms of malarial attacks.

History.—Malarial disease, accompanied with vomiting of black bile, with petechia and with hemorrhages have, from time immemorial, been frequent and fatal in the warm, marshy countries bordering on the Mediterranean and Black Seas. They appeared with such dangerous and putrid symptoms as not only to have been called pestilential, but to be confounded with the plague itself. Rome was often afflicted with malignant malarial fever. This seemed to be due to the marshes and stagnant pools around the city for, when drains and common sewers were laid and the Pontine marshes drained, Rome became a healthy city. In Alexandria there seemed to be a similar disease that was very much dreaded in the Autumn after the recession of the Nile. Prasper Alpinus says, "It began by nausea, sick stomach, vomiting of bile and passage of bloody urine with jaundice. Dr. Livingston speaks of this dreaded disease in his ', Travels in Africa ;" and all know of its fatality in the West Indies, Central and South America.

One of the most remarkable circumstances connected with hematuria is that it occurs as an endemic disease in some countries. In the Isle of France three-fourths of the children are affected with hematuria at some time or other. Among the predisposing causes are bad hygiene and sanitary condition, improper diet, etc. The chief cause is said to be due to the parasite hematuria discovered by Bilhorz. It is an elongated, soft-skinned, bi-sexual entozoon, three or four lines in length, of the trematode or fluke kind. It inhabits the branches of the portal system and the minute veins of the pelvis, of the kidneys, uterus. and bladder. When a patient lives in a marshy country there is generally an overplus of malarial poisoning in the system, a chronic malaria in the form of "chronic chills.' The system has been affected with these malarial germs, the plasmodia of Laveran, and your patient has been using every patent "chill tonic" that he could find in the drug store, and God knows what else, only adding insult to injury.

With reference to the pathological anatomy the profession is not united. Our text books give very little on hematuria. This is plain enough because all our standard authors live in the North where they never see a case; hence we have to get it from our own observations. We find that the color of the skin varies from a light to a dark yellow according to the case, and is of a perfect uniform tint. Everywhere the stomach is perfectly sound when the patient has not formed any drunken habits. The gastric juice is green, limpid, or contains lumps of green matter exactly like chopped spinach. We find the red blood corpuscles in the urine, but some deny their presence and say that we find only the hematin, and that we have hæmoglobinuria or urine containing blood-coloring matter. I have examined the urine under a magnifying power of 430 diameters. The urine was found to contain numerous casts of tubuli uriniferi. The casts were filled with crystals and fragments of granules of the coloring matter of the blood. I also found a few altered blood corpuscles, but if they had ever been present in large

numbers they had been destroyed by a mixture of the bile and urine. There is no doubt but what we have extreme hematuria in the kidney structure. The capillaries become so engorged with this poisoned blood containing the germs, plasmodia of Laveran, that they may rupture. Oxidation is interfered with and, of course, will cause degeneration.

After death you find the exterior of a golden color, the *liver* enlarged and of a slate color on the surface and a deep bronze color within. *Gall-bladder* is distended with greenish. almost black bile. *Spleen* is enlarged and filled with black pigmentary particles similar to those absorbed in the liver, and it has all the appearances of a malarial spleen. *Stomach* is filled with a fluid similar to that found in the gall-bladder. *Kidneys* are found to have some slate-colored spots on the surface, and they are also greatly congested and of a dark-purplish appearance. The *blood vessels* are filled with coagulated blood. *Bladder* contains a large amount of bloody urine.

The patient first begins to look anæmic and to have chills, but this he does not pay much attention to; probably walks about while he has a chill. Finally he goes out and voids bloody urine, and then sends for a doctor. When you get there you find your patient with a haggard expression about the face; the sclerotics of a yellow or golden color, and the skin nearly the same color. Patient will tell you he has had a hard chill and then passed bloody urine. He then has high fever and is very restless; bowels constipated, and, probably, the kidneys acting very slowly. The liver is engorged and spleen enlarged. Then you have a genuine case of malarial hematuria, and it is the place for you to show your skill as a physician.

I do not think a genuine case can be confounded with anything else, if the physician has ever seen a case before. It comes nearer yellow fever than anything else.

Prognosis is generally guarded, but if seen in time and properly treated the case will recover. Uremia is the thing to be feared, but if you get the liver and kidneys to act well there is not so much dread, though I do not believe that a genuine case of hematuria ever got entirely well, for, usually, nephritis develops after the hematuria.

There comes the "tug of war" where Greek meets Greek, and so it is when physician meets physician in the treatment of this dreaded disease "hematuria." I do not remember, but it has only been a few years ago when quinine was considered the sole remedy; to-day we have learned better. I admit that quinine is destructive to the germ—the plasmodium of Laveran. But study the physiological action of quinine and the pathology of hematuria and you will see that it is not indicated. Look! The patient is already depressed and the kidneys in a crippled condition—they are hyperemic. Bartholow says medium doses of quinine cause hyperemia of the brain and depress the heart's action. It acts on the cardiac motor ganglia, and causes feeble movements of the heart and lowers the vascular system. This is just what we don't want. Dr. Elliott, my professor in Tulane University, would preach all day, "Give quinine," but I have learned better, and the man who does give it is not a conservative practitioner. Again, quinine in long continued use will irritate the stomach, and you know that in hematuria nausea is the worst symptom we have to combat. I have seen it really alarming. Then give quinine? No, some will say, give it hypodermically. If you do sometimes produce abscesses. I do not believe quinine is perfectly absorbed when given internally, therefore it must be an irritant. This hemorrhage is what you are trying to stop. If this is so, then you do not want to use quinine, for I do not remember ever seeing where quinine was used as an hemostatic. We all know that hemorrhage is only a symptom in hematuria, and there is not a case on record where quinine arrested hemorrhage. As this is so, we must resort to some other remedy. And now, if you will follow me, I will give you a treatment which I believe every physician from the Delta will endorse, a treatment that I consider the most conservative one—one in which the powers of the patient are supported and this dreaded poison eliminated. And to do this we give something to arouse the secreting and excreting organs—the liver and kidneys—and for this what are we going to give? Is it quinine? No! Is it hyposulphate of sodium? No! Still I was taught by two of the brightest lights of our profession—Dr. Elliott of New Orleans and the illustrious Dr. Sim of Memphis—to give

it. Do I give it? Yes; sometimes; and I have seen what I thought pretty good results from it. But there is one other remedy which I must speak of, a remedy time-honored for a great many diseases, one which we have all had to use. I speak of the "Great Mogul"—calomel. It may be given *ad libitum*, say ten to fifteen grains every hour, until you get the physiological effect. I have seen as high as 100 grains given in five hours. I usually give it in eight or ten grain doses until I get the desired effect, and then follow it with hyposulphate of sodium or this prescription:

	Sulph. Magnesia	℥ ss
	Aromatic sulph. acid, gtts	10
	Tr. opii, gtts	5
Sig.	Take at one dose.	

This I give about every three hours for the nausea, and give either cracked ice or water as hot as the patient can drink it, and the patient will soon learn to like it.

As soon as my patient shows signs of improvement I give some diuretic, preferably acetate of potash and the following prescription:

	Phosphoric acid (dil.)	♏ v
	Strychnia nitrate, gr	i
	Aqua, q. s.	℥ iv
Sig.	Teaspoonful every four hours.	

The acid has a tendency to arouse the liver to action, and the strychnine acts as a stimulant.

But, in conclusion, let me say, whatever else you do, support your patient and use the eliminative treatment.

WOMEN IN THE MEDICAL PROFESSION.*

LOUISA C. DROUILLARD, M.D., MEMPHIS, TENNESSEE.

From the earliest time since women have taken up the study of medicine, the department of mid-wifery was almost entirely given over to them, but it was not until 1848 that woman entered the field with a school of her own, and entered to remain. In Europe the admission of women to the profession had been widely opposed because of disbelief in their intellectual capacity, in America one is less often permitted to doubt aloud her intellectual capacity; the controversy was therefore shifted to the ground of decorum. While women were allowed to practice mid-wifery it was because it was assumed that that department of medicine did not require the assistance of medical art; that women in labor traversed a purely physiological course and only required the attendance of kindness, patience and natural sagacity, all obtained without scientific knowledge from her own sex; but when the necessity for knowledge was recognized, when men became skilled while mid-wives remained ignorant, the choice was no longer possible and the great welcome of mid-wifery was obliged to yield to the greater safety of enlightened masculine practice. The history of medical women in the United States may be divided into seven periods.

1st. The Colonial period. During this period of female mid-wifery the medical profession proper of the colonies remained entirely unorganized. Without making inquiry a superficial observer could have almost overlooked the existence of doctors as a special class in the community.

The second period was that of the Revolution. At this time physicians began to travel to Europe for instruction, and during the war their services in the military hospitals, though apparently not very useful to the sick, served to bring the profession for the first time out of obscurity and resulted in the collective observation of disease on a large scale. More than one hundred and fifty years elapsed after the first settlement before a single effort was made, either by public authority or by the enterprise of individuals, for the education of physicians, or for improving the practice of medicine; no medical journal was published until the close of the eighteenth century, and the first anatomical dissection was made in New York,

* Read before the Tennessee State Medical Society, April, 1895.

in 1750. The first achievement of the new-born art and education was the expulsion of "females" from every out-lying province of the profession, and from the world-old traditional privilege as accoucheee. It was a harsh return to make for the services rendered to the infant settlement by those valiant mid-wives who tramped through the snow by night and by day to bring into a very cold world the citizens of the future Republic.

After this came a period of reaction. In 1848 a Boston gentleman, Mr. Samuel Gregory, began to protest against the innovation of male mid-wives and, to judge by the contents of the public press, opened a crusade on behalf of the women. Mr. Gregory's protests awoke sympathetic echoes, and some that were not sympathetic, for the President of the British Medical Association said: "I am not over squeamish, nor am I over sensitive, but I almost shudder when I hear of things that ladies now do or are attempting to do. One can but blush and feel that modesty, once inherent in the fairest of God's creation, is fast fading away. You, gentlemen, who know the delicacy of woman's organization, must know that constitutionally they are unfit for many of the duties of either doctor or nurse. May not habit so change that fine organism that sensitive nature of women, as to render her dead to those higher feelings of love and sympathy which now make our homes so happy, so blessed?"

The fourth period was initiated when Mr. Gregory, supported by the popular enthusiasm which he had aroused, succeeded in opening a school of medicine (so called) for women, in November, 1848. The first term lasted three months; a second term began the following April, 1849, with the announcement that the twenty pioneer pupils had not only followed the lectures but had attended about three hundred mid-wifery cases with the most satisfactory success. In the prospectus issued for the second year of the school, Mr. Gregory brought forth a new set of reasons for its support; that in New England there was a surplus female population of 20,000, and hundreds of these would be willing to devote any necessary length of time in fitting themselves for a useful, honorable and remunerative occupation. They could afford, moreover, to give their services at a much cheaper rate than men, charging about one-third the ordinary fee—thus, five dollars instead of fifteen for attendance on a confinement case. Thus not only would the morals of the community be preserved, but the burden on its purse be considerably lightened by the employment of educated women as obstetricians. As the medical profession has become keenly alive to the lucrative character of obstetrical and gynæcological practice, this suggestion that it might now profitably be undersold, naturally aroused the keenest resentment. It was soon reported that the cheaper practitioners were to be prepared by a system of education so cheap as to be absolutely worthless and, unfortunately, the early history of the first medical schools for women entirely justified this accusation. In 1850 the Woman's College of Pennsylvania was founded, and after a long and precarious period it finally rested upon a solid basis.

Period five; the struggle for an entrance into the reputable colleges. Half-a-dozen women, unknown to each other and widely separated, appeared almost simultaneously upon the scene and demanded opportunity to be educated as physicians. The first of this remarkable group of women was Harriet K. Hunt, of Boston. This lady had for several years assumed the responsibility of practicing medicine while yet unprovided with a medical diploma. This was reprehensible, but from a practical stand-point the course seems to have been justified by subsequent events for when in 1847 Miss Hunt requested permission to attend lectures at the Harvard Medical School, her request was promptly refused. After the graduation of Elizabeth Blackwell at Geneva, in 1839, Miss Hunt thought that the times might have become more favorable and in 1850 repeated her application to Harvard. On this occasion five out of the seven members of the faculty voted that Miss Hunt be admitted to the lectures on the usual terms provided that her admission be not deemed inconsistent with the statutes, but when the students heard that a woman was to be admitted they held an indignation meeting and the faculty advised the female student to withdraw, which she did, but she continued her practice, and in 1872 celebrated her silver wedding in the profession.

Elizabeth and Emily Blackwell were led to the study of medicine in a different manner than Harriet Hunt. While still quite young their father died leaving a large family to their support. They wrote:—"When we realized the infinite narrowness and pettiness of the avenues open to women, we determined to open a new door and tread a fresh path." In this determination a new keynote for women was founded. It was in 1845 that the plan of studying medicine became a settled resolution with Elizabeth Blackwell, and she was thus the first woman on the American continent to whom such an idea had come. She applied for admission into twelve medical colleges throughout the country and at last was admitted at Geneva, N. Y. The faculty referred the matter to the students and they decided to invite the courageous applicant. After graduation at Geneva in 1849, the first woman in America of modern times to receive a medical diploma, Miss Blackwell went to Europe and by exceptional favor succeeded in visiting some of the hospitals of both London and Paris. Emily Blackwell was refused admission to Hobart College at Geneva, but was allowed one year's study at Rush College, Chicago. For this permission, however, the college was censured by the State Medical Society, and the second term was denied her. The College at Cleveland, Ohio, permitted her to complete her course, 1852. After this she became a pupil of the celebrated Sir James Y. Simpson of Edinburgh, who gave her the highest praise, as did several distinguished physicians in London and Paris in whose hospital wards she worked. In 1855, the two sisters opened a little dispensary for women which grew into the New York Infirmary. In 1850 Dr. Marion Sims arrived as an exiled invalid from Alabama. With a brilliant, original surgical operation as his stock in trade, he succeeded, with the aid of some generous New York women, in founding the first Woman's Hospital in the world. Now that there was a college in Philadelphia and a hospital in New York, more women entered the profession, but their trials and difficulties to a less determined set of women would have been unsurmountable. These did, indeed, walk by faith and under an overruling Providence.

The sixth period was the founding of hospitals where women could obtain clinical training. The New York Infirmary in 1854 by the Drs. Blackwell; the Woman's Hospital in Philadelphia in 1862; the Hospital for Women and Children in Chicago, by Dr. Mary Thompson, that pioneer of women in the West; in San Francisco, Cal., in 1875; in 1882 in Minneapolis. In 1865 a school for women was opened in New York City, much against the will of the leading women physicians, as they were anxious for the admission of women into the good colleges, but the colleges would not admit them, not but that the women had loyal friends among the men, but these were in the minority. In 1869, under the patronage of that grand man, Dr. William Byford assisted by other progressive men and by Dr. Mary Thompson, a college was founded in Chicago that has grown from beginnings so small that at one time lectures were given in a building that had been the stable of the Women's and Children's Hospital, and as Dr. Byford, in reviewing the history at the dedication of a handsome new building with every facility, said, "It did have a very horsey odor." This college has borne Dr. Sarah Hacket Stevenson, Dr. Eliza Root, Dr. Marie Kreigler, and many others that are honors to the profession. In Michigan the State University opened its medical department to both sexes. Since this, colleges for women, especially in the West, have received hearty support.

Then came the struggle for official recognition in the profession. In the prolonged debate which followed, woman's cause was defended by many distinguished men with as much warmth as it was opposed by others. The Philadelphia County Medical Society assumed the responsibility of being the first to check the alarming innovation of woman's schools and female doctors. In 1859 was introduced the resolution declaring that any member who would consult with women should forfeit his membership. Upon this resolution the censors declined to express an opinion; endorsement was, however, obtained from a committee of the State Medical Society. The recommendations of this Society were supposed to be manditory on all the County Societies throughout the State, but the Montgomery County Society, under the chivalrous inspiration of Dr. Hiram Corson, passed a resolution that "females, if properly educated, should receive the same

treatment as males, and that it was not just to deny women admission to male colleges," and after they had, with great perseverance, established one for themselves, to refuse it recognition. In 1870 this Society elected Dr. Anna Lukon to membership. In 1871, when the American Medical Society met in San Francisco, and the female physician question was subjected to a long and eminated debate, Dr. Atlee of Philadelphia, remarked that the opposition to female colleges generally came from the professors or contributors of other colleges. "These woman's colleges now stand in many respects better than many colleges represented in the Association, and give obstetrical and clinical training such as is not given in a majority of the colleges for men. By the rules of our Medical Association I dare not consult with the most highly educated woman physician, and yet I may consult with the most ignorant, masculine ass in the medical profession." In 1881 the first woman delegate was admitted as a member of the State Society of Pennsylvania, and in 1876, Dr. Sarah Hacket Stevenson was sent as a delegate by the State Medical Society of Illinois. Dr. Marion Sims was President that year of the American Medical Association, which met in Philadelphia. By an almost unanimous vote the mighty question which had disturbed the calm of so many medical meetings was settled through the influence of Dr. Jacobi of New York. Dr. Mary Putman who was the first woman of America to graduate from the Paris E'cole de' Medicine, received professional recognition. In Philadelphia, women were championed by Drs. Hartshorne, Atlee and Thomas; in Boston, by Drs. Bowditch and Cabot; in Chicago, by Dr. William Byford. The various State Societies have admitted women the years following: Kansas, 1872; Iowa, 1874; Vermont, 1875; Maine, New York and Ohio, 1876; California and Indiana, 1873; New Hampshire, 1879; Minnesotta and Massachusetts, 1880. In 1886, 91 hospitals in the United States admitted women to their clinics. In Philadelphia, in 1883, the first woman interne was appointed to the Blockley Hospital after a competitive examination. In 1881, two women were placed on the visiting staff. In Chicago, the hospital privileges have been most equitably distributed. Cook County has had five women internes, and the Insane Asylum has a resident woman physician. Dr. Sarah Hacket Stevenson is a visiting physician to the Cook County Hospital. Dr. Carson of Pennsylvania, at the meeting of the State Society offered a resolution, "That a female physician be appointed for each insane hospital or asylum where female patients are confined." This has been done in many states, both for the good of the institutions and the profession, and it is to be hoped that it will soon be so in every state. In 1882, Dr. Putman Jacobi was invited to lecture on Children's diseases in the New York Post-Graduate College, she being the first woman to lecture in a masculine school. Dr. Sarah McNutt holds a chair in the same school. If time permitted, a history of the work that women have done and are doing would amply repay the earnest effort of those who have been the means of elevating woman to the place she now so ably fills in every department of the profession.

As yet women have not accomplished much from a scientific standpoint; they have been doing pioneer work. But they have a resolute helpfulness in dealing with the individual cases entrusted to their care, and a passionate loyalty to those who who have put their trust in them. Today, the woman physician has every opportunity to fit herself to combat disease and she has the help and sympathy of the profession. Now it is hers to show by conscientious, faithful work that woman will be in the profession an honor and a refining influence.

Four years ago I came among you a stranger, and from the first I have received only kindness and consideration, I being the first woman on whom you have conferred the honor of reading a paper before you. I thank you.

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SATURDAY, JUNE 22, 1895.

EDITORIAL.

THE REMOVAL OF THE "REPORTER."

The publishers announce the removal of the MEDICAL AND SURGICAL REPORTER from the present address in Philadelphia, Pa., to New York City, where it will occupy quarters in the magnificent new Constable Building, 109–111 Fifth avenue, corner of Eighteenth street. Both the editorial and the business offices will henceforward be located at this address. All persons whatsoever having business of any kind with the MEDICAL AND SURGICAL REPORTER, will please make note of this change and direct all communications accordingly. Exchanges are requested to make immediate alterations in their mail lists. Books for review, reprints, original articles, and all communications of any nature intended for editorial attention, should be directed specifically to the Editor of the MEDICAL AND SURGICAL REPORTER. All matters relating to the business conduct of the journal should be directed specifically to the publishers. Considerable time will be saved and many mistakes avoided if correspondents will observe this simple request.

This transfer to New York City has long been contemplated and, after careful consideration of all questions involved, the publishers' decision is as here announced, they having become convinced that the highest interests of the REPORTER and of its vast patronage will be advanced by the change.

Forty-three years ago, when the MEDICAL AND SURGICAL REPORTER made its first appearance in Philadelphia, American medical journalism was in its incipiency and Philadelphia long had been and still was, the undisputed centre of American medicine. The development and changes made during these forty odd years, have been as great and as radical in the science of medicine and its correlative enterprises, as have been the changes and developments in any field of human effort. The REPORTER has grown with the growth of American medical science. It has kept its

position in the front rank of medical journalism, and it is because of its determination to advance yet further and higher that the present change is made.

It may seem somewhat venturesome for a journal to remove from the place where it was born and has lived for so many years, and undertake to establish itself in a locality where the field is already occupied by journals of the highest character, but the REPORTER is not going to New York to seek a living as an artisan out of employment. It goes as a well established business seeking opportunities for enlargement and growth under conditions which will allow of such. In journalism, as in almost any other business, of all cities in the East, New York unquestionably offers the finest facilities. Instead of going to New York to "hunt for work," the REPORTER takes to that city all of the interests and influences acquired during a successful career of more than forty years.

Again, while Philadelphia has been the abiding place of the REPORTER, this journal has never professed to be distinctively representative of the local profession. Indeed, surprising as it may seem, with so great a number of medical journals published in that city, Philadelphia has not one periodical which can be said to represent the local profession. Several publications issued are avowedly in the interest of one or another individual institution. No journal, however, represents Philadelphia medicine in the same sense that the local professional interests of other large cities, as New York, Chicago, Boston, etc., are constantly represented by the journals published in these respective cities. This is a great misfortune to local interests as eventually, must be discovered by those who are responsible, who live apparently only to preserve ancient customs, and who evidently are blind to the fact that the "world do move." The greater misfortune, however, is to the cause of scientific medicine and the advancement of higher medical education, for no body of scientific men, at home or abroad, is, so far as professional qualifications are concerned, superior to the medical profession of Philadelphia. For such a body wittingly to allow the continuance of customs and policies which we little influence and suppress knowledge which of right should be given to the entire profession is, now, as culpable as, presently it will be found to have been suicidal.

It has been the design of the REPORTER to present to the profession-at-large medicine in general rather than local interests, and since it is not essentially dependent on local support, residence is a matter largely of convenience and business facilities. The removal of the entire business to New York will involve no change in the REPORTER'S policy, but it will open up some opportunities for increasing its usefulness and enhancing its value to the general practitioner, for whose use in practical application, it endeavors to supply accurate information of the procedures of modern medical science.

Diphtheric Vulvitis in a Child.

Gnichtel (*Jour. of Cutaneous and Genito-Urinary Diseases*) has reported the case of a girl, one year old, who for five days had been irritable and restless and appeared to suffer pain referred to the gential region the symptoms being aggravated during micturition. Examination disclosed several patches of false membrane covering anteriorly the internal portion of both labia majora and nymphæ and invading the urethral orifice. The membrane was firmly attached and grayish-white in color. It was further learned that two fatal cases of diphtheria had recently occurred in the house in which the child resided, the last but a week before she was taken ill. There were no other symytoms. Bacteriologic examination of the membrane revealed the presence of diphtheria-bacilli. The patches disappeared upon the use of local applications, chiefly of hydrogen dioxid and mercuric-chlorid, and the child made a good recovery. At no time were marked constitutional symptoms observed.

SOCIETY REPORTS.

THE MANAGEMENT OF THE NEW-BORN.

See page 847.

DISCUSSION.

DR. J. W. BRANDEAU, Stribling: I have a few remarks to make. The first is as to the length one cuts the cord. I was taught and have been in the habit of cutting the cord about two inches in length, giving room for the application of a second ligature before putting on the dressing, which I apply midway between the first one and the abdomen of the child. I have never had a case of hemorrhage from the umbilical cord.

As to the dressing of the cord. I have been in the habit of using just plain clean cotton cloth—cheesecloth when I can get it in the house perfectly clean. I cut a little hole in the center, bring the stump of the cord through, and lay it to the side it will go the most naturally. I then take another clean fold of cotton cloth and place it smoothly over the cord, and over this place the flannel band. I do not advise the use of grease because that retards the absorption of the cord.

As to asphyxia. I think the old-fashioned way of blowing into the nostrils of the child gives the best results. I have been told that by this method we blow carbonic acid gas into the child, but I believe that with two or three deep breaths we so change the residual air that we do not blow much carbonic acid gas into the child. I have worked on them sometimes an hour, even after the heart would cease, sometimes before natural respiration would supervene.

As to feeding the child. When the child rests quietly it should not be disturbed. When it becomes hungry it will let you know. I put it to the breast that it may get the first oily substance in the breast, which acts as a laxative; and to promote the action of the uterus in this way reflexly I use the cow's milk, adding a little sugar to make it more palatable.

DR. T. J. HAPPEL, Trenton: I don't agree with the paper. I don't believe some of the statements there are true. I would never waste two hours fooling away with a dead child. If it is dead it is dead, and we ought to know whether or not it is dead within less than two hours.

Another thing, I never saw a piece of adhesive plaster placed on a surface without producing an eruption of some kind. Consequently I wouldn't place a piece of adhesive plaster on the abdomen of a child. I would use the band also as a preventive, for I would rather take the preventive measures than to try to cure.

As to the feeding. I don't think the Lord ever made a baby but he provided a way to feed it, and I believe the Lord has provided also the best bottle ever made for that purpose; and let us use that to feed our babies and not feed them on Mellin's food nor cow's milk nor anything else.

DR. T. K. POWELL, Dancyville: I think it is altogether unnecessary to tie the cord twice. We can leave the part of the cord towards the placenta loose. I think more children have been starved to death on Mellin's food than have ever been saved; and as to the fat meat, I don't see any advantage it could be, except possibly to make the child swallow better. It has been used by the darkies for this purpose. A piece attached to a string would be suspended from the ceiling in the middle of the room, a little above the children's heads. When the little negroes could no longer comfortably swallow the bread upon which they were fed, they would jump up and catch the piece of fat meat in the mouth, thereby lubricating the parts.

DR. N. C. NEWMAN, Normandy: I don't see the necessity of giving the newborn babies whiskey. As to the fat meat, the baby's stomach and intestinal tract are not in a condition to digest oils and meats. This can only make the baby sick. There is not a man here that can ramapiece of fat

meat down his throat without it making him sick.

As to tying the cord two or three inches long. It is a wholly useless structure after it is cut, and there is no hemorrhage from it even if you don't tie it at all. I don't see the necessity of cutting it two or three inches long.

Dr. H. J. Warmuth, Smyrna: If the child is apparently dead and warm water does not revive it, I introduce my finger into the rectum and attempt to dilate the sphincter ani. If that does not effect anything, I am satisfied the child is dead. I do not apply two ligatures to the cord. It cuts off quicker without them.

Dr. C. Holtzclaw, Chattanooga: The feeding by mothers must be stopped. It is simply a relic of barbarism. In these days of artificial light, syphilis, tuberculosis and dyspepsia, there is hardly one mother out of a hundred gives good rich food for the infant. Artificial milk, cow's milk, is the only food which should be used, and mother's milk should not be given to the child unless it can be properly sterilized. I would like my friend Happel to get a law passed through the Legislature to have nursing by mothers stopped.

Dr. W. Frank Glenn, Nashville: Genito-urinary men sometimes have something to do with new-born babies. There is no other subject, I believe, in the practice of medicine in which there is more folly and the exercise of less common sense. We give up too soon in nearly every instance in the attempt to resuscitate the new-born baby. I don't think we ought ever to cease work under three-quarters of an hour, at least. We are not scientific enough to say when they are dead. They may not breathe and the pulse may not be perceptible, yet they may live. One thing I disagree with Dr. Marable in. If the child cries, give it a little catnip and whisky. If the child is ill during the first few days, he is usually hungry. If the mother's milk does not satisfy him, give him some cow's milk and sterilized water sweetened. Nature is the best guide on earth as to food.

Dr. Happel: Didn't you say yesterday, if the child cried the best thing was to circumcise him?

Dr. Glenn: Immediately on ligating and cutting the cord, I would remove the prepuce; therefore, that would have been done and could not be blamed for it.

As to the cord. You have here a useless appendix, which must slough off. You need simply antiseptic dressing. I wrap it, after cleaning, with carbolic gauze, then with soft cotton to protect the abdomen of the child, and secure it, and in a few days it sloughs off and the umbilicus is well. I do think if anything in medicine needs common sense and the discardance of old women's advice, it is the management of the new-born. It is a mistake to think a person living at a cross-road in the country is not entitled to the scientfic practice of medicine as well as those in New York City and London. If the old women in a cross-road of fifty inhabitants would say: "Put a piece of fat bacon in the child's mouth," I would say, "No, I don't want it." And if they said, "Why, we have all done it," I would say, "The child's mouth was made for the mother's milk and not for the fat." Then, for the cord, plain antiseptic dressing is all that is necessary.

Dr. M. L. Bradley: Saddlersville: We have neglected to speak of the eye. I always use a solution of nitrate of silver, which is dropped into the eye. My brother, over there, would lead us to believe that the mothers are infected with diseases, that the child has to pass through an infected passage, and the child's eyes are exposed often to the gonorrhœal discharge, which could be gotten out of the eyes and the child protected from the disease the mother had.

Dr. Roberts, I want to say a word in defence of the scorched linen. In this regard the old women were ahead of Lister, for they rendered it aseptic. Therefore, if you have to resort to a piece of cotton or linen which has been lying in the drawers for a long time, by passing it through the flame you, to a certain extent, get rid of germs.

You make it more or less absorbent, if it is dry.

Dr. Smith: The method of Crede is the introduction into the eye of a two to nine per cent. solution (ten grains to the ounce) of nitrate of silver. This should be dropped into the eye immediately after birth after cleansing any discharge on the outside of the eye. This has reduced the percentage of ophthalmia neonatorum cases from ten to less than one per cent.

DR. GLENN: Do you mean every child born is to have medicine dropped into its eyes, whether you know of disease or not?

DR. SMITH: Yes, sir.

DR. GLENN: I would never agree to that. It is unnecessary to drop any such solution into the new-born's eye.

DR. SHEDDAN: That may be all right in the state of New York, where nearly the whole state is a city, but in country practice ophthalmia neonatorum is a very uncommon disease, and I think it would be absurd and ridiculous to go through any such procedure.

DR. BAXTER: It is not a question of the country or city, but the chance of ophthalmia neonatorum arising. New York recognizes neither city or country, and it has reduced the rate markedly. It is a scientific point we are arguing.

DR. SHEDDAN: In this work of obstetrics in the country you may take the universal opinion of country men. What is it you wish to prevent the eye against? Irritating vaginal discharges is all you claim for it, from gonorrhœal infection from the mother. In country work, as my friend, Dr. Joseph Price has said in his acquaintance in the valley of Virginia, ophthalmia neonatorum would be as great a curiousity as would be a case of leprosy in the city of Philadelphia, or more so. No, sir; I wish to say with Dr. Price, in this work where due precaution is used—I admit it is needed in the cities—it is absolutely useless to talk of dropping such a solution into *every* child's eyes. I would like to ask if that prescription was in the Garden of Eden, and has it been handed down ever since? When did blindness commence? In my practice in the country, in 554 cases of labor I have never seen ophthalmia neonatorum, except in the negro population.

DR. HITT: Our friend has just spoken of ophthalmia neonatorum in the Garden of Eden. I have just returned from a district as near to it as any man can get—India,—and I will say there are thousands and thousands of children born there annually who have this disease.

DR. OMOHUNDRO: It is a law in Austria to use a two grains to the ounce solution of nitrate of silver. It is considered malpractice if the doctor fails to introduce it.

Dr. W. I. EDWARDS, Nashville: I think a physician should have sufficient intelligence to know when a child he delivers is subject to such trouble, and then is time to apply the nitrate of silver and not put it in every infant's eyes.

DR. H. BERLIN, Chattanooga: The nitrate of silver is recognized as a preventive throughout the whole civilized world. As to my friend saying such a disease does not exist in the country, my experience is quite different. Cases of this kind of disease are not stayed, it seems, by the hand of man. Consequently, he may not know what is going on in his own community. As nitrate of silver in such strength as is recommended, a one or two per cent. solution, can do no harm to the eye, and, it seems, may do considerable good, there is no contraindication for the use of it. In fact, in Austria the mid-wife carries not only the carbolic solution for the hands, but she must also carry this solution of nitrate of silver for the eyes of the child. Now, Dr. Glenn says every boy should be circumcised as soon as born; why not put this in the eyes of the baby at the same time? It is not absolutely necessary to understand that we must use it as a preventive against this disease produced by the gonococcus. It has been remarked that in India it is produced, not by gonorrhœa, but by the filth and dirt. Now, if the gentlemen in the country would come to the city, it would give them a good chance to see how these things are transferred from the cities to the country.

DR. SMITH: In regard to the point Dr. Edwards makes, I will say we cannot wait until the diagnosis is made because it is everlastingly too late. The nitrate of silver solution must be dropped in before the germs have had a chance to develop in the tissues. At that time there is no disease of the tissues and the germs are simply on the surface. In regard to this disease being absent from the country, the experience of every specialist, I think, will contradict that, because these cases come to us from the country at least as often as from the city. And suppose Dr. Sheddan has had 554 cases without a case of ophthalmia; suppose he has had a thousand, would it not be better to put in a few drops in the thousand cases than to have one case of opthalmia neonatorum? The statistics in the blind asylums, where this practice is not followed, show that ten per cent. of the inmates have opthalmia neonatorum.

DR. GLENN: Does every child having

ophthalmia neonatorum go blind? Do you mean, if you don't prevent it, you will lose the eye if it exists?

DR. SMITH: No, not always; but the great majority, even if properly treated, will become blind.

DR. GLENN: I wish to say I have never lost an eye, where I have had an opportunity to treat the patient properly.

DR. T. H. MARABLE, Clarksville, (closing discussion):—The discussion seems to have been so diversified that a man could take almost any course that he sees fit in the treatment of the new-born. As to resuscitation. I must confess, and I am very sorry in that confession, that I am not such a brilliant diagnostician as Dr. Happel, in deciding as to whether or not the child is dead in 20, 25 or 30 minutes. I would not be surprised, if Dr. Happel has discontinued trying to resuscitate children in that time, he has found them living, if he has not buried them too soon, for I have treated them an hour and a half and then laid them away and known them to be resuscitated. Certainly you can resuscitate children when they are seemingly dead.

Now as to Dr. Holtzclaw. Yesterday I was struck by Dr. Powell's statement that East Tennessee was God-forsaken, because I had been taught that East Tennessee was the pure part of Tennessee. I think the purity of the air was what led them to go to the polls without the poll-tax receipt. But he says the frequent diseased condition of their females would cause them to resort to artificial feeding. Well, I am glad to say this is not the case in Middle Tennessee. Our women are healthy enough to nurse their babies, unless they are too fashionable. I hate most awfully to have to acknowledge that fact, after being raised and taught what a healthy country East Tennessee is.

As to Dr. Powell. Dr. Powell says in North Carolina, where he practiced before the war, they would hang a piece of fat meat up from the floor for the little negroes to jump up and grease their throat with. I did not practice before the war, and can say nothing about that.

I can see no use of going further into this matter, except the eye trouble. I did not touch that through an over-sight. I began the practice of medicine in the country, have been in the profession eighteen years, and have seen but two cases of ophthalmia neonatorum. In neither was there blindness following. I do as a fact wipe off the face, but I must confess I would never follow the practice of putting foreign matter into the eye. The Doctor spoke of adhesive plaster. It was surgeons' plaster I referred to. Perhaps he did not clean the child thoroughly enough. If he will try that, and try a little longer to resuscitate the child, he will probably succeed better.

THE DAMAGE SUIT.

See Page 849.

DISCUSSION.

DR. MENEES: There is not one of us who is not more or less interested in this subject; almost all of you certainly much more so than I am, and the young members especially, who have their races in the main before them. Dr. Eve states in that paper correctly that the large majority of these suits are brought by pauper patients. He miggt have gone further correctly and stated that nine out of ten of them are brought by professional pirates. [Applause.] Sir, are there no means of protection against this sort of insidious and stealthy assault upon the members of the best profession, except possibly the theological profession, and the one which does the most charitable work, not only without gratitude, but absolutely with malice and prosecution at the bottom of it?

One time, Sir, during the life time of Dr. Eve's father, I was summoned from my couch to go see a woman, who had unfortunately sustained some accident on the way home from church. The messenger, who was a very bright young man,

impressed upon me especially that they wanted me and nobody else. I said, "You are mistaken about that, you want anybody else rather than me." "Well, she must have you and she will have nobody else." And he talked about it so convincingly and earnestly, I said, "Young man, there is a malpractice suit lying at the bottom of this. Go for Dr. Eve and get him." Very reluctantly the messenger went for Dr. Eve. In the ripeness of time the Doctor came to me and asked if I had any recollection of that case. "Don't you think, they have sued me for damages in that case!" I said, I knew from the beginning there would very likely be a suit for malpractice. Dr. Eve and Prof. Lindley were both sued.

Gentlemen, they lie in wait for you in the dead of night, come and arouse you from your slumbers, and with their oily tongue seduce you and rob you not only of your services but of your well-earned gains.

DR. W. FRANK GLENN, Nashville: I want to say a word in reference to the action of the profession when a law suit threatens. A patient almost invariably, before he sues for malpractice, goes to some Doctor he has confidence in and relates the case, with the statement that a physician did so and so. It may be wrong or ignorant, and the Doctor says it is wrong, and the patient immediately concludes to enter suit. I have always discouraged these patients. When asked if I would be a witness I have said, "No Sir, I will not." I would not go to the court house for any such thing. You can nine times out of ten say, "You have not paid him, probably, when you did send for him, and I will not testify against him." We should stand as a brotherhood, and I believe it is safe to say not a suit is brought without the advice of some professional man being asked

DR. T. K. POWELL, Dancyville: My knowledge of these cases is that they are usually gotten up by the shyster lawyers who haven't much to do. A plan was suggested in Chicago, viz., for you gentlemen of Nashville, for instance, simply to employ a first-class lawyer to take charge of these cases throughout the year, and pay him a salary. Dr. Eve and some others can stand these suits, but some of us cannot afford them. If we employ to take charge of these cases, we will stop them to a great extent at least.

DR. W. A. H. COOP, Nashville: I don't aid or abet a suit against the veriest quack. Not that I have any sympathy for the quack, but for the precedent. If you aid and abet a suit against a quack and obtain damages againt him, then some other individual will undertake to get damages against the honorable, upright and well-prepared physician. I well remember in the graduating charge, the late lamented Governor said, "Swear for no other; I will swear for you."

C. Holtzclaw, M. D., Chattanooga, presented a paper on

CHLOROFORM.

DISCUSSION

DR. T. L. MADDIN, Nashville: The subject is a very interesting one. There is one point I will speak of, and that is in reference to the dilatation or stretching of the sphincter ani. The most extraordinary experience I ever had with the administration of chloroform was when I was dilating the sphincter ani in performing an operation for hemorrhoidal tumors. The patient was a distinguished officer of the Confederate Army. I had been operating for some twenty minutes or half an hour, and thought I had removed all of the tumors. I insisted upon him taking ether, although I believed chloroform the best for that kind of an operation. I got through, except a little pimple of a tumor. I said to the Colonel, There is only a little pimple left and if I can clip it off the operation will be done. The gentleman administering the anæsthetic was a man of inexperience, but the Colonel said, "Don't be afraid of giving me chloroform. I was shot almost to pieces in the Confederate Army, and was filled with chloroform for three months. They just gave it to me by the gallon. I have taken chloroform enough to swim a boat." I whispered to the gentleman, to just give the Colonel a whiff or so of the chloroform. He didn't put a teaspoonful of chloroform on the inhaler. I felt the pulse just before I began to operate, thinking it was all right, but there was no pulse. I thought he was dead. They all thought he was dead. I was dilating the sphincter ani and yet that symptom occurred. It is true I was not dilating at that time, but I had been dilating for some time previous.

I worked two hours and a half to keep

the man alive. After we had kept up artificial respiration for an hour and a half without any apparent effort on the part of the patient to breathe, we stopped, and he made one inspiration. We waited for a second, but it didn't come. We then commenced our artificial respiration again, and after about five or ten minutes we suspended the artificial respiration and he gave us two inspirations and stopped, and stopped so long I was afraid he would never breathe again. We commenced the artificial respiration again, and absolutely it required two hours and a half to resuscitate him. He is living to-day.

DR. SMITH:—In regard to the use of cocaine in operations on the nose. The use of cocaine in chloroform narcosis has been considered especially dangerous. The symptoms from cocaine and from chloroform we would consider in the same way, and cocaine would be contraindicated when we use chloroform. I have never used cocaine and chloroform at the same time. I would suggest, as an anesthetic for the mucous membrane, a solution of antipyrin. With regard to the dilatation of the sphincter ani, I see that the suggestion is made to place a piece of ice in the rectum.

DR. GRADY: I have not had as much experience in the use of chloroform as Dr. Holtzclaw, yet I have used it and seen it used for 25 years, and I must say I have never seen any trouble from its use. I have seen some deaths following the administration of ether; whether from the use of ether I cannot say.

I have seen the section of the kidneys arrested after the use of ether, although not entirely arrested. So I want to commend highly and give my sanction to the paper of Dr. Holtzclaw. I would like to ask the Society one question with regard to the use of nitrate of amyl. I see some physician has recommended the combination of one ounce of nitrate of amyl with six ounces of chloroform, saying that will make it absolutely safe and effectually do away with any bad results from the use of chloroform. If any of the gentlemen have had experience with this, I would like to hear it.

DR. J. W. BRANDAU: I have recently had some experience with the combination of nitrate of amyl with chloroform. I saw a suggestion in the *Journal of Materia Medica*, that the proportion was very large so I combined about two drops of the nitrate of amyl to a dram of chloroform. In the cases I have used it, it has had a very happy effect. In the case of an inebriate, I kept the patient under about 30 minutes without any untoward result. But in plethoric cases I would think it not so good.

The Bacteriology of Rheumatism.

Dr. Saccaze (*Arch. Gen. de Med.*) has recently reported six cases of rheumatism which clearly indicate a causative relation of the staphylococcus to this disease. Dr. Saccaze remarks that "it is frequently possible, in cases of acute articular rheumatism, to discover in the history of the case evidence of a lesion preceding the pain, and other symptoms whereby infection with the staphylococcus might have occurred." In four cases of the disease, rheumatism occured consecutively after two attacks of sore throat in persons suffering from chronic hypertrophy of the tonsils. It is remarkable that these acute exacerbations of throat ailment are frequently observed in connection with the acute attacks of articular rheumatism. In the opinion of Dr. Saccaze, the general condition of the body which gives rise to the joint affection, occurs in these cases through the tonsils, which are constantly exposed to infection by the staphylococci which abound in the mouth.—*Modern Medicine and Bacteriological Review.*

Perityphlitic Abscess not Due to Appendicitis.

Homans (*Boston Medical and Surgical Journal*), gives the details of a case of abscess in the right iliac region occurring in a child 4 years of age. There was pain to right of and around the umbilicus, also distension of abdomen and tenderness. The pulse was 120, and temperature 103° F. A dose of oil produced only a slight movement. On opening the abdomen the healthy bowels were seen, and to the right of the umbilical region was a level surface of grayish color. This was the roof of an abscess, and on it lay the healthy appendix. The abscess was evacuated and recovery ensued, the appendix not being disturbed. Except for the youth of the patient and the fact that the appendix was normal, the case did not differ from others that are called appendicitis when operated on, and in which the appendix does not happen to be seen.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Prognosis in Slight Amounts of Albuminaria.

Dr. G. V. Poore (*Lancet*), from the study of many cases concludes that the discovery of even a small amount of unsuspected albumen by the acid test of boiled acid urine should lead the physician to re examine the patient carefully, to be sure that some of the concomitants of such a condition have not been overlooked. A trifling hypertrophy of the heart, slight pallor, deficient body weight, slight increase of the tension of the pulse, ever so slight a puffiness around the ankles, tongue slightly furred or slightly tremulous, a florid complexion or other evidences of an old and perhaps forgotten syphilis, at once assumes a serious importance. If, after repeated examinations of the urine, the albuminuria is found slight and temporary, the patient otherwise looking strong and hearty, with no suspicion of intemperance and with no flaws in the family history, the prognosis is good. If the albuminuria is slight and permanent, the prognosis is grave in the majority of cases. When much albumen is continually found in the urine, the patient is in imminent danger, though Dr. Poore has had one such case in which the patient lived for twenty-six years. It should not be forgotten that albumen may be temporarily present in the urine of persons who afford no reliable evidence of kidney disease. In such cases it is the result of various disturbances, such as cold bathing, excessive exercises, injudicious diet, sexual excess, menstruation, leucorrhea, and other causes.

Do Not Lance the Gums.

So good an authority as J. Lewis Smith has recently spoken against the practice of lancing infants' gums. In a paper read before the New York County Medical Association (*Medical Record*), he said the belief prevails to a wide extent that the cutting of teeth is a common cause, not only of painful gums and poor appetite, but also of enterocolitis and other serious maladies, which are often allowed to run along until beyond the skill of the physician. Our ancestors in the profession were to blame for the wide-spread impression that much disease is due to dentition, since at one time it was a common custom to incise the gums. As to lancing the gums, he thought one could get along as well without it. If the gums were red and irritated, there must be some other condition to account for the irritation. He did not think the physiological process of normal dentition was to be interfered with any more than any other physiological process.

Sexual Debility—Their Causes.

Dr. T. R. Sturgis in a recent number of *Gaillards Med. Journal* formulates the following:

1. That the cases of sexual debility which are marked by imperfect erections and by premature emissions, are usually if not entirely due to hyperæsthesia of some portion of the urethra.
2. That masturbation has very little, if anything to do with it, beyond the fact that if indulged in to excess it may induce a tendency toward this hyperæsthetic condition, but this is no more marked in masturbators than it is in those persons who indulge to excess in the venereal act.
3. That organic stricture has little, if anything to do with it; but that associated with this hyperæsthetic condition there is an irritable condition of the canal which produces spasmodic contractions of the urethra upon attempts to pass instruments, oftentimes during the first act of micturition and at the time of connection.
4. That varicocele plays no unimportant part in these cases.
5. That neuralgia of the testis, if a cause of this disease, induces it merely as a secondary consequence to the pain which is one of the distinguishing features of this disease.
6. That tuberculosis, syphilis and gonorrhœa may also play their part and should all be reckoned with in summing up the causes which may induce this peculiar and depressing condition of affairs.

Hunger.

Many persons have noticed that even if hungry on retiring, it is an exception to have a feeling of hunger on awakening in the morning. It is probable that during sleep the functions of digestion being in abeyance, the stomach contracts, and this is probably why some persons cannot eat late at night. The empty stomach having no function to perform, contracts on itself and in the morning it requires some little stimulation for it to begin its daily work. This is why so many, especially invalids, cannot take a hearty breakfast and why in some countries the breakfast consists of a cup of coffee, and a second breakfast is taken at noon when the whole body is awake.

The hearty American breakfast strikes terror to the average European and the delicate French woman would probably faint at the sight of a beefsteak at breakfast. For those who can, it is a good plan to drink a little cold water on rising. It washes out the somach, takes away any mucous that may have collected there in the night and stimulates the digestive glands to give forth their secretion and prepare for that important act, digestion.—*Popular H. Magazine.*

Primary Peritonitis Due to the Pneumococcus.

At the same meeting Dr. Le Gendre, on behalf of Drs. Arnozan and Bassaet (Bordeaux), read a note, of which the following is a summary:

Primary peritonitis with pneumococci is so rare an affection that its existence in the adult has been denied; but we recently met with a case in a young girl of eighteen.

The pus, in this case, presented all the characteristics of that found in pneumococcic infections, viz., the greenish-yellow color, downy appearance, consistency, adhesion and fibrino-albuminous composition which distinguish the latter. Moreover, bacteriological examination revealed the presence of numerous disseminated, encapsuled diplococci resembling in appearance those described by Talamon and Frankel, and which were not decolorized by Gram's method.

Adding this observation to those published by various authors, there are in all eleven cases, of which only two were adults. Of the eleven patients, eight died, the mortality thus being about 73 per cent, which indicates that primary pneumococcic peritonitis is much graver than any other localization of this microbe. It is probable, however, that when the affection becomes better known and intervention more successful, this unfavorable impression will be greatly improved.—*N. A. Practitioner.*

A Case of Perforated Gastric Ulcer.

Kirkpatrick (*Montreal Medical Journal*), reports the case of a girl admitted to the hospital suffering from pain in the abdomen and shoulders. This pain started two days before and was accompanied by vomiting. The abdominal pain was particularly acute in the epigastric region. The patient was not vomiting at the time she was first seen. There was tenderness in the epigastric and innermost portion or the right hypochondriac regions. The belly was tympanitic. Cœliotomy was performed. The anterior wall of the stomach was slightly adherent to the parietes. The adhesions were broken down, gas escaping, and the lesion was found in the anterior wall of the stomach, a little to the right of the œsophageal line, and more towards the superior than the inferior gastric border. The opening was a little larger than a five-cent piece, and was closed with a continuous Czerny-Lembert suture, after trimming the ragged edges with a pair of scissors. A drainage-tube was inserted and the wound was closed. The tube was removed in twenty hours. Food was administered on the third day. The patient made an uninterrupted recovery.

Electrical Treatment of Red Noses.

Dr. Helling, *Med. Rec.*, says that a red nose is due to contraction of the arterioles and dilation of the veinlets. He claims to have cured a number of cases by the application of a continuous current of moderate intensity for five to ten minutes daily.—*Ex.*

Dangers of Thyroid Feeding.

Beclere remarks that the benefits to be derived from thyroid feeding in myxœdema must not make us forget its dangers; for thyroid juice poisons the heart, and may cause death by syncope. This has been found by experiment on the dog.

The writer fed an ape on fresh thyroid glands from newly killed sheep. The animal died in ten days. It had survived the same treatment when tried a month earlier.

It is said that an adult and one or two children have died in the Paris hospitals from treatment by thyroid feeding, and if this be so, it is to be regretted that the cases have not been published, so that practitioners may be put on their guard against a repetition of such occurrences. In connection with this mode of treatment the pulse is the best guide. Not only must its acceleration be noted, but perhaps still more its instability. Under the influence of the slightest effort, its frequency may be raised to 110, or even 160. At the commencement of treatment the patient ought to be confined to bed, or at least to his room, and he ought to be warned to avoid every exertion that might suddenly accelerate the heart's action. He ought to be kept under observation for some time after the treatment has ceased, because thyroid juice seems, like digitalis, to have cumulative effects. Some patients who died suddenly in England had taken no thyroid glands for some days before the fatal issue. The idiosyncrasies of patients are very various, and it is well to intermit the administration from time to time until the useful and safe dose of the remedy for the particular individual has been ascertained.—(*La Medicale.*)

Posture During the Growing Age

of children exerts a marked influence on their bodily development. Everyone is somewhat familiar with the physiological fact that the constant use of a muscle causes an increase in its size, while disuse causes it to weaken and become smaller. Recognizing the importance of this well-known physiological law, teachers and parents should keep ever in mind the effects of school life on the symmetrical and healthful development of the bodies of school children. A popular writer on such themes says:

There is a tendency among school children, especially among school girls, to assume habitual postures both in sitting and standing. The habit of throwing all the weight of the body on one leg produces a corresponding throwing of the upper part of the body toward the opposite side in order to establish the necessary equilibrium. This tends, of course, to curve the spinal column on which the upper part of the body is supported. In this position the body and all the internal organs are thrown out of their normal vertical position, and the force of gravity still further exaggerates this result. Thus the muscles of the neck are unevenly exercised in the unconscious balancing of the head upon the vertebral column.—*Popular Health Magazine.*

Effect of Muscular Overwork on the Heart.

As muscular exertion continues and the vessels of the muscles become dilated the flow of blood from the arteries into the veins will tend to become much more rapid than usual. The pressure in the arterial system will fall consequently, but that in the veins will become increased, and, unless a corresponding dilatation occurs in the pulmonary circulation, blood will tend to accumulate in the right side of the heart, the right ventricle will be unable to empty itself completely, shortness of breath will arise, and even death may occur. At first the right side of the heart is affected and the apex beat disappears from the normal place and is felt in the epigastrium; but the left ventricle also becomes dilated, though whether this is simply through nervous influence tending to make it act concordantly, or for some other reason, it is at present impossible to say. Severe exertion, even for a few minutes, may produce this condition in healthy persons, and when the exertion is over-continued it may lead to permanent mischief. More especially is this the case in young growing boys; and it is not merely foolish, it is wicked, to insist upon boys engaging in games or contests which demand a long-continued over-exertion of the heart, such as enforced races and paper chases extending over several miles. Intermittent exertion, either of a single muscle or of a group of muscles, or of the whole body, appears to lead to better nutrition and increased strength and hypertrophy, but over-exertion, especially if it continues, leads to impaired nutrition, weakness and atrophy. If we watch the movements of young animals, we find that they are often rapid, but fitful and irregular, and varied in character, instead of being steady, regular and uniform. They are the movements of the butterfly, and not of the bee. The varied plays of childhood, the gambols of the lamb, and the frisking of the colt are all well adapted to increase the strength of the body without doing it any injury; but if the colt, instead of being allowed to frisk of its own free will, is put in harness or ridden in races, the energy which ought to have gone to growth is used up by the work, its nutrition is affected, its powers diminished and its life is shortened. The rules which have been arrived at by the breeders of horses ought to be carefully considered by teachers of schools and by the medical advisers who superintend the pupils.—*Lauder Brunton in Br. Med. Jour.*

On Transmisibility of Cancer from Man to Animal.

M. Boinct, after a long series of experiments on the transmissibility of carcinoma from man to animals, states that after having made repeated inoculations on the rat, the rabbit, and the guinea-pig, he concludes that histologic examination of the lesions which resulted does not authorize him to pronounce in favor of such transmission. —*Semaine Medicale.*

Inflammation; its Nature and Significance.

Dr. J. Froehlich (*Aertz Rundschau*), as long as the organism is alive, it will react against every local irritation, that is, attempt to counteract the same if possible. If the irritation is slight, the force of resistence of the tissues will overcome it; if more pronounced than the force of resistence it becomes pathological, and the simplest form of inflammation results. Without inflammation, repair cannot take place, vital activity will cease, and destruction follows.

The real nature of inflammation consists in an active hypermia and an increase in the processes of metabolism. There is a dilatation of the arteries, later on of the veins, and last of all of the capillaries. The blood stream is at first accelerated, but very soon becomes permanently retarded on account of the choking of the capillaries with cellular elements. The white blood corpuscles will move slowly along the walls or the vessels or become entirely stopped, and then enter the tissues in a greater of less number, where they exert an important and active influence in destroying the germs of infection.

In the treatment of an inflammation the use of ice does more harm than good. We should not try to overcome the arterial congestion, but the venous engorgement, and for this various hydrotherapeutic procedures and massage are the best. Frequently the strengthening of the whole organism is more important than the local treatment, this being especially the case in chronic processes.

Prophylactic Treatment of Ophthalmia Neonatorum.

Dr. P Budin by long experience has found the Crede solution (nitrate of silver 1:50) effective in the prevention of ophthalmia neonatorum, but it often produces considerable swelling of the lids, with a moderate conjunctival suppuration on the second day after use. On account of these disadvantages other antiseptics, as phenic acid, corrosive sublimate, iodoform, etc., have been recommended. The author finds that a weaker solution of nitrate of silver (1:150) acts with almost absolute certainty in preventing the disease, and is free from the objections of the stronger solution generally applied. Among 2,004 cases treated there were only two cases of ophthalmia, and seven cases of secondary conjunctivitis. Patients are prepared previous to accouchement by having a bath and a vaginal injection of sublimate solution (1:4000). Immediately after birth the child's eyes are carefully wiped with cotton and one or two drops of a 1:150 nitrate of silver solution are instilled between the lids. The author has made this application to the newborn in his private practice for two years past, during which time no case of purulent ophthalmia has occurred. Only one case of mild conjunctivis was seen that recovered in a few days under simple dressing fluids.—*Progress Medical.*

Treatment of Cystitis in the Female.

John C. Hersler (*Univ. Med. Mag.*) the chief indications for treatment are:

1. To remove any discoverable sources of irritation which act through the medium of the urine. This may be effected by a milk diet, and a discontinuance of the use of acid, pepper, etc. Any mechanical source of vesical irritation should receive appropriate treatment.
2. The urine should be rendered bland by the use of a milk diet, the ingestion of considerable quantities of water, the administration of potassium citrate, if the urine be too acid, or of boric acid if it be alkaline.
3. Pelvic congestion should be relieved by hot vaginal douches, placing the patient in the knee-chest position; and the correction of constipation.
4. The inflamed cystic mucous membrane may be relieved by the administration of boric acid, salol, ol. santal, copaiba, or creosote by mouth; or the use of injections of boric acid, carbolic acid, or nitrate of silver in suitable strengths.
5. The patient's general health should be improved by tonics, etc.
6. Rest in bed, especially in all acute cases, is absolutely imperative.

While advocating direct local treatment for cases of cystitis which do not readily respond to ordinary therapeutic measures, the writer advises that it should be employed with judgment and caution.

The Micro-Organism of Chronic Rheumatism.

Schuller (*Medical Record*) has found a specific bacillus for chronic rheumatism. The organisms are described as measuring 2.6x0.85, and are constricted at the middle. They stain well with carbol-fuchsin, but are easily decolorized by acids. They are said to grow fast at 25°C. in the dark. All the ordinary culture media are fitted for their development. Schuller inoculated the joints of rabbits with cultivations obtained from human joints, and succeeded in producing a non suppurative arthritis analogous to the rheumatoid arthritis affecting man. The chronic rheumatism seems to be an entirely different disease from the acute, from which Schuller has only succeeded in cultivating staphylococci and streptococci, never the specific baccillus described above.

Electricity in Amenorrhœa.

Dr. Panecki, in the *Therap. Monatsch.*, says the *Medical Times*, lets the profession know that the faradic current is the most successful means of treating amenorrhœa. The poles should be allowed to act inside the uterus. The current can be increased at each sitting, and the treatments required, ranging from five to fifteen minutes, are all the way from five to thirty. The doctor had treated eighteen cases and cured them all. One was a married woman, aged thirty-one, who had never menstruated, though she had periodical headache, etc.

Presystolic Apex Murmur of Aortic Regurgitation.

Fisher (*Lancet*) cites a case, and remarks that a low-pitched presystolic murmur may occasionally be heard at the apex in cases of aortic regurgitation. The high-pitched, blowing diastolic murmur may possibly be audible from base to apex, and even in the axilla, but just at the apex a rumbling sound takes its place. It may be made to disappear by pressure of the stethoscope, and thus be overlooked. "In this instance the presystolic bruit was not low-pitched and rumbling, but of that loud, rolling character which reminds one of the sound produced by a flapping sail as it is filled by a puff of wind. Well marked though the murmur was, the mitral orifice proved to be of natural size." There was also present a presystolic thrill at the apex. Fisher also mentions that presystolic apex murmurs may occur unassociated with either mitral stenosis or aortic insufficiency, being due simply to adherent pericardium, and suggests that in both of these conditions simulating mitral stenosis the innervation of the heart may be, in some obscure way, affected, giving rise to the production of the murmur.

The Diagnosis and Theory of Morbus Basedowii (Graves's Disease).

Lemke (*Deutsche Medicinische Wochenschrift*) comes to the following conclusions concerning Graves's disease: (1) A patient suffers with Graves's disease as soon as delirium cordis and tremor are present. All other symptoms are consecutive and of secondary nature; they simply confirm the diagnosis. (2) The cause of Graves's disease is in all probability to be sought in a faulty chemical influence exerted on the blood by the thyroid gland. (3) Graves's disease, therefore, is no disease of the nervous system; one requires for its diagnostication no special neurological knowledge. He believes the diseased product of the thyroid gland to be a special muscle poison, the delirium cordis being the result of this poison exerted on the heart muscle, and the tremor the result of the same poison on the skeletal muscles.

Menstrual Agina.

M. Raymond Petit has been led to regard the sore throats of menstruation as caused by steptococci. They are generally benign, but may terminate in the formation of an abscess or give rise to facial erysipelas. The writer is of the opinion that women during menstruation should guard against infection by the use of antiseptic linen and by particular care of the mouth. Women, during all her genital periods (menstruation, accouchement) affords a specially favorable soil for the development of the streptococcus.—*La Medecine Moderne.*

Menstruation, Gestation and Small-pox.

Voight (*Volkmann's Samm. klin. Votrage*), has prepared a monagraph on the influence of Variola on Menstruation, Pregnancy, Labor and Fœtus. Small-pox, he says, causes congestion of the endometrium, both when the fever begins and when the rash appears; in consequence, menstruation or metrorrhagia occurs in the non-pregnant subject. Half the cases of pregnancy in small-pox patients vaccinated in youth end in abortion or premature labor. The pregnant woman's condition is desperate in confluent or hæmorrhagic small-pox. These two specially severe forms are very much more frequent in pregnant than in non-pregnant women. The mortality of pregnant small pox patients once vaccinated in youth varies between thirty and thirty-five per cent., but 50 per cent. of patients delivered while suffering from small-pox die. The danger of small-pox in pregnancy is found, as might be expected, much worse in women who have not been vaccinated. Nearly all the infants are lost, as they are either born very weak, or contract small-pox before or after birth. When an epidemic of variola occurs, prophylactic vaccination of all pregnant women must be practised, and, should an infant be born strong and healthy, it should also be vaccinated.—*British Medical Journal.*

Pigmentation in Amenorrhœa.

Lawrence (*Bristol Medico-Chirurgical Journal*) reports the case of a girl suffering from amenorrhœa with pigmentation. This became so marked as to suggest Addison's disease. She was treated with wine of iron, 1 drachm, and Fowler's solution of arsenic twice daily, burgundy in moderation, careful diet, the addition of milk, and her life regulated in accordance with general hygienic principles. This resulted in complete cure after many months.—*Therapeutic Gazette.*

The Improvement of the Results in Complete Hysterectomy for Carcinoma of the Uterus.

Mackenrodt (*Zeitschrift fur Geburtschilfe und Gynakologie*) believes that the operation of complete hysterectomy for carcinoma of the uterus does by no means offer absolute results, that the disease returns in more than half the cases operated upon. One cause of this unquestionably lies, as shown by the investigation of Winter, in the possibility of the inoculation of healthy tissue from the carcinomatous part; also, and particularly, has the writer concluded from the same investigations that the operation is not radical enough. Carcinomatous nodules are very frequently allowed to remain in the broad ligaments, and a necessary result is that the disease sooner or later returns. Mackenrodt has demonstrated this through the careful examination of a large number of extirpated uteri. The operator, he says, has believed that the incisions were made only in healthy tissue but the microscopical examination of removed organs show the infiltration extending to the line of incision. Thus, in order to improve the results of complete removal of the uterus for carcinoma, he believes that more tissue should be removed from the broad ligaments than is the custom. In accomplishing this the injury of the ureters must be carefully avoided. This last is attained by separating the bladder not only from the uterus, but also from the anterior surface of the broad ligaments. The bladder, with its attached ureters, is thus considerably separated from the uterus, and the tissue for a distance of an inch on each side of the cervix can easily be excised. The injury of the ureters after this procedure is scarcely to be considered. The separation of the bladder and ureters from the anterior surface of the broad ligaments can be accomplished quite as well in vaginal as in abdominal hysterectomy. Where there is a rigid vagina, large uterus, and advanced carcinoma, Mackenrodt usually does abdominal hysterectomy.

Urination after Labor.

Dr. N. Recht (*Rev. Internationale de Bibliog. Med.*) in a thesis has made a study of micturition in the lying in period. He comes to the following conclusions:

1. Urination, after labor, in the majority of cases, follows spontaneously.
2. Catheterization is but exceptionally required; if it be necessary, it should be deferred as long as possible.
3. It is only indicated when the bladder assumes abnormal proportions, or if retention occurs.
4. Catheterization is liable to occasion two evils—cystitis, in spite of all precautions, and dependence of the bladder for a time upon the catheter.

Dangers of Massage of the Uterus.

M. Pozzi presented the specimens from a case illustrating the injurious effects of massage in suppurative lesions of the appendages. A patient suffering from metritis and double salpingo-ovaritis, after an attack of pelvic peritonitis diagnosed as hæmatocele, was treated by massage, the operator being a skilled one. The treatment was badly borne, and caused no improvement. M. Pozzi afterward performed laparotomy and extirpated both tubes, which presented the external appearance of pyosalpinx. Outside of the left tube there was a small purulent area. On opening the tubes the left one was found to contain blood and the right a rose-colored pus. Under the influence of the pressure exercised during the massage, rupture of the vessels and hæmorrhage in the tubes had evidently occurred. The same pressure might also have driven pus out of the tube, thus explaining the purulent area found on the wall of the pelvis at the outer extremity of the tube. M. Pozzi believed that massage should be reserved for

chronic cases in which there was no suppuration.

M. Bouilly reported several cases illustrating the bad effects of massage. A woman with a neoplasm in the posterior cul de-sac was submitted to massage, when suppuration of the tumor took place, causing the death of the patient. Another case of simple retroversion suffered the most painful symptoms after massage, and a third was confined to bed from its effects, though she had only a slight ovarian affection. The indications and contra-indications of the treatment should be clearly defined.

M. Lucas Championniere had also observed similar ill effects, and had been recently obliged to perform laparotomy in one such case and hysterectomy in another.

M. Richelot had performed hysterectomy on a patient who had undergone treatment by massage with only temporary relief.

M. Routier stated that he had made use of massage in his practice for the past eight months with good results, but that he employed it only in cases in which no lesion existed.

M. Monod regarded the method as an excellent one when suppuration was not present, and in this opinion the members generally concurred, stating that they wished only to call attention to the dangers of its abuse and the necessity of intrusting the cases to competent persons.—*Universal Med. Jour.*

GYNECOLOGY.

New and Speedy Method of Dilating a Rigid Os in Parturition.

At a meeting of the Obstetrical Society of London, Dr. Farrar (Gainsborough) gave the details of two cases in which he had used a 10 per cent. solution of cocaine as an application to the rigid os. In one case he had applied the cocaine after endeavoring vainly to relax the cervix by means of chloral, bromide of potassium and morphia, and the most persistent attempts at digital and mechanical dilatation, with and without chloroform. He decided upon incising the os, and used the cocaine to this end. After five minutes he introduced the finger as a guide to the scissors, and, to his surprise, found the os widely dilated. In the second case, a primipara, forty-eight years of age, he used every effort, as before, to produce relaxation, and waited three days before making the application of cocaine, which was immediately successful. In four minutes the os had yielded. He considered the dilatation to be due to the cocaine in both cases. Dr. Armand Routh said that Dr. Dibbs, of Shankin, had recommended cocaine as relieving the pains of the first stage of labor, and that Mr. Head Moore advised cocaine and boric acid pessaries in cases of rigid os. He himself had found it useful. The president, Dr. G. E. Herman, said that two cases were rather a slender foundation upon which to base a conclusion, but if Dr. Farrar's results were confirmed by further experience, he would have made a valuable addtion to our obstetric resources.—*The Lancet.*

Immediate Trachelorrhaphy.

There are always old questions in gynecology that will be resurrected and discussed and ardent supporters for both sides are not wanting. Dr. Boldt recently advocated waiting for some time after childbirth before sewing up lacerations.

This Dr. A. Palmer Dudley opposes in the *American Journal of Obstetrics* and asks a number of questions bearing on a comparison between immediate and intermediate trachelorrhaphy, and after citing a number of cases in support of his side, gives for the purpose of emphasizing his remarks the following summary:

1. That suturing the lacerated cervix properly immediately after delivery will result in primary union of the same and prevent many of the evils that follow in the wake of a union by second intention.

2. That the fear of septicemia attending the manipulation of the cervix for the same, and the introduction of poisons which will induce septicemia at the same time, is an unfounded one, and would be dissipated by giving such work a proper test.

3. That it is a method of procedure more justifiable than an immediate repair of the perineum, the latter of which the profession of to-day universally advocates.

4. That the securing of primary restoration of the laceration hastens involution, prevents subinvolution and the various forms of displacement which are induced by it in such an over-weighted organ.

5. The catgut is the proper suture and perfectly safe and reliable when properly prepared.

THERAPEUTICS.

The Rational Treatment of Diphtheria.

Local Treatment. 1. Thorough disinfection with peroxide solution, rendered neutral with bicarbonate of soda. 2. Administration of freshly prepared pineapple juice, either alone or with the tincture of the chloride of iron, if a condition of anæmia be present. 3. Application of papoid, either by insufflation of powder or painting with strong solution.

Constitutional Treatment. 1. Alcohol given in heroic doses. 2. Hypodermatic injections of strychnine pushed until there is exaggeration of the deep reflexes. 3. Concentrated nutritious diet.

Wind Colic of Infants.

Dr. G. C. M. Godfrey in the *Medical Record* suggests the following:

Extract zingiberis fluidi,	c.c. 6 (ʒ iss)
Tincturæ asafœtidæ	c.c. 12 (ʒ iij)
Aquæ menthæ piperitæ	
Aquæ cinnamomi,	aa c.c. 30 (ʒj)
Syrupi simplicis,	q. s. ad. c c. 120 (ʒiv)

M. Sig.—ʒ j (c.c.4) t. i. d. in water before meals.

Of course, the practitioner will change the quantities and ingredients to suit each case; it is very hard for an infant to take.

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ORIGINAL ARTICLES.

A PLEA FOR EFFICIENT LEGISLATION REGULATING MEDICAL PRACTICE.*

PERRY H. MILLARD, M. D., ST. PAUL, MINN.

During the last decade no question in medical sociology has attracted greater attention than medical education. The requirements of our colleges not being upon a par with those of other countries, nor with other departments of education in this country, it was but natural that the profession as a whole, the medical press, and organized bodies of medical men, should join in a demand for needed reforms. During the formative period of our history it is but natural that abuses should have arisen in methods of education and obtain a firm rooting. A spirit of criticism exists that will not subside pending the definite determination of a question of such vital interest to the profession of the country.

As a nation during the first century of our history, we have established a system of common school education that challenges the admiration of the civilized world. It is a subject of regret, however, that in certain advanced lines of education our methods have proven most defective. This is true of medical education; a system having secured foothold with us that is indeed anomalous.

Having no support other than the fees of students; without university or college connection; without support from the state, generally accorded other systems of education; without restraining legislative enactments; without laws regulating the granting of charters for purposes of medical instruction; it is indeed little wonder that at the end of the first century of our history as a nation, chaos should reign supreme.

The agitation of the question of medical education is bearing fruit however, in that a majority of the schools situated in the northern states demand at the present time evidence of preliminary fitness before matriculation, and that in a period of five years all colleges known to the writer have extended the period of time of study; with a change of the minimum length of term from five to six months. After the present year every medical school of recognized standing will require attendance upon four courses of lectures in different years, each course, of six months' duration before conferring the degree of M.D. The reforms thus far accomplished have only been secured in the face of determined opposition at the hands of the representatives of the low-grade institutions. Future opposition will result in disaster to the participants. Professional sentiment

*Read before the American Academy of Medicine, at Baltimore, May 6, 1895.

is decidedly with those schools now operating under the advanced curricula. This is particularly manifested by the increased number of matriculates in the last three years at schools operating under the four years' course. The fiscal matriculation at the University of Pennsylvania and Columbia is, approximately, eight hundred, Harvard five hundred, and others in proportion; while that of the recognized low-grade institutions has sensibly fallen off.

Notwithstanding the trend of public opinion, we are firmly of the conviction that our only safety consists in the establishment of efficient legislative acts in substantially every state. The high-grade schools are undergoing a period of evolution and are determined to inaugurate greater system in methods of work; with low-grade schools little evidence is at our command pointing to improvement.

The elevation of the standard of requirements in the latter class of schools have seemingly been entirely in response to the requirements of the respective state boards of medical examiners.

The indifference of the profession to methods of medical education has been far reaching in its pernicious influences. Blinded by our own shortcomings we did not awaken to a realization of our environment until our interests were greatly jeopardized. We found ourselves drifting, in the estimation of both the public and profession, towards a condition of professional inefficiency, not unlike that of French medicine in the seventeenth century, so graphically described by Moliere. One of the greatest evils of our system was the flooding of our ranks with a horde of poorly educated practitioners far in excess of our legitimate demands. The latter assertion is convincingly illustrated by the statistics gleaned from the recent excellent paper of Professor Pepper on Medical Education, affording comparative statistics relating to the proportion of practitioners to the population in different countries of the globe.

TABLE INDICATING THE PROPORTION OF PHYSICIANS TO THE POPULATION.

Austro-Hungarian Empire	1	to	5,857
Belgium	1	to	2,084
France	1	to	2,666
German Empire	1	to	3,038
Italy	1	to	3,536
Netherlands	1	to	2,484
Norway	1	to	3,961
Russia	1	to	8,551
Spain	1	to	5,375
United States	1	to	300

The number of medical colleges indicates a similar disproportion.

NUMBER OF MEDICAL COLLEGES TO THE POPULATION.

Austro-Hungarian Empire	1	to	5,153,917
Belgium	1	to	1,534,111
Brazil	1	to	7,001,167
Canada	1	to	3,336,877
Chili	1	to	2,887,552
France	1	to	5,477,591
German Empire	1	to	2,471,923
Great Britain	1	to	2,358,767
Italy	1	to	1,445,109
Netherlands	1	to	660,249
Norway	1	to	1,988,771
Sweden	1	to	1,600,917
Russia	1	to	14,403,317
Spain	1	to	1,950,027
United States	1	to	440,151

It will be observed from the above that the proportion of practitioners and the number of schools are greatly in excess of other countries. Medical colleges in foreign countries are likewise independent financially, being, as a rule, directly supported by the state or possessing a direct university connection.

An investigation of this subject reveals beyond the possibility of successful controversion that the most efficient profession is found in those countries protected by efficient legislation; while a correspondingly low standard of professional fitness exists in countries not similarly protected.

At one time considerable opposition existed to the regulation of medical practice by legislative enactments. With the defeat of attempts to destroy the effects of this form of legislation by litigation, and the moral support afforded by the recent decision of the Supreme Court of the United States and Supreme Courts of the several states, as well as the apparent benefits from the successful operations of the law in a large number of states, it is pleasing to note a decided change of sentiment in favor of this form of legislation.

The existing opposition to this form of legislation is greatly disappearing, being greatly confined at present to the charlatan, the faculties of a few of our low grade schools and the public press. We can trace the existence of statutes regulating medical practice from the thirteenth century; in the year 1237 licenses were only obtainable in Italy upon attendance at medical lectures for a period of five years, with preliminary entrance requirements demanding three years' work in philosophy.

The first degrees in medicine were evidently conferred in Italy in 1384. Laws

regulating medical practice have existed in all civilized countries for many centuries. It is unfortunate that in this country the diploma has been given a legal interpretation; in foreign countries it is simply an evidence of scientific value. With the advent of statutes regulating medical practice this custom upon the part of the courts is becoming abrogated. We cannot but conclude that in the older countries we have a superior profession in point of intelligence, with a more desirable environment; while with us we have, as a whole, men somewhat inferior in their preliminary training, a number triple that of any other country and a professional environment most undesirable.

The essentials of efficient medical legislation will incorporate the following features:

(1) The adoption of more rigid rules governing the admission of students to medical schools.

(2) The determination of the applicant's fitness to practice by an examination upon all the branches of medicine.

(3) The right to refuse or revoke licenses for unprofessional or dishonorable conduct.

(4) An adequate penalty for violation of the provisions of this variety of legislation.

(5) The boards of examiners to be appointed by the Governor, with proportionate representation by different schools of practice.

In support of demands for an adequate entrance requirement, it is conceded that medicine is now more nearly practiced from a scientific basis than at any time in its history. Without adequate preliminary fitness the broad field cannot be grasped nor its practice entrusted to persons without well trained minds.

Persons contemplating medicine as an avocation should give the scientific branches particular attention in preparation. A thorough course in the scientific department of our better equipped colleges or universities will permit of the successful accomplishment of the course now provided in the four years' curricula in a period of three years. I fully concur in the position taken by Professor Vaughan, however, in that the classical course does not prepare the student in a manner that he can safely abridge the work now required in the four years' curricula. The necessity of a thorough college training is more apparent now than at any previous time. While an immediate attempt, looking to the demand as above suggested, would probably meet with defeat, I am of the opinion, however, that by concert of action we can secure the adoption at this time of an elevation of the standard of fitness, requiring a college or university matriculation, or its equivalent, of all students wishing to commence the study of medicine. If the student cannot furnish a matriculation ticket from a recognized college or university, he or she should be required to undergo an examination that would admit to such course.

Under existing relations we cannot safely entrust this examination to the representatives of the teaching body. Except in a few of our high grade schools the entrance examination as at present conducted has been a farce. The factors leading to this condition are the same as outlined earlier in this paper. It is the result of college competition with an unnecessary multiplication, in recent years, of the number of teaching bodies. It is my judgment, based upon a somewhat varied and extended experience, that a majority of the schools in this country exist to serve the personal interests of the respective faculties rather than to serve the legitimate demands of the people. About twenty-five per cent. of our schools have a matriculation of less than sixty pupils.

The determination of the fitness of the student to commence the study of medicine should be placed in the hands of a body of men entirely disinterested. I know of no body better qualified to superintend the execution of this important trust than a state board of medical examiners. If not such a body, then a committee composed of members of a faculty of a college or university.

The minimum of entrance requirements should be uniform between the different states. Under the operations of the New York law regulating the examination of students commencing the study of medicine, much good is being accomplished. I desire to urge upon the profession the necessity of provisions in future acts looking to a rigid protection of the gateway to the study of medicine.

Having submitted satisfactory evidence of preliminary fitness, only such persons

should be admitted to undergo the professional test as have received their course of professional education at schools of medicine whose curricula of requirements are acceptable to the respective boards. A minimum of requirements, both as to time and teaching facilities, are as essential in measuring professional fitness as it is for similar purposes in universities, colleges, and our public school system. A school should not be recognized unless it is working under a minimum that will assure the graduation of a class of persons that can safely be entrusted with the care of the sick. In arriving at a conclusion upon this most important function I desire to particularly impress upon the members of these boards the fact that medicine as at present understood and practised is radically different from that of a few years ago. To comprehend requires years of study and a training in laboratory methods and surgical technique that can only be grasped when afforded by a person trained in methods of medical pedagogy. The clinical and laboratory facilites of many of our schools are shamefully inadequate. Several colleges known to the writer having operated for years with substantially no assets. It is the duty of each board to enquire fully into the facilities of each school represented by graduates who are applicants for degrees.

Having determined upon the fitness of the school to afford satisfactory courses of medical instruction, applicants holding degrees from such institutions should be admitted and a further test of fitness demanded by requiring an examination upon all the recognized branches of medicine. These examinations should be conducted by numbers, be scientific, and of sufficient severity to assure the public a thoroughly educated profession. Students from the respective schools of practice should undergo an examination upon the same questions, no necessity existing for questions not primary in character.

Licenses should not be refused or revoked for other than gross unprofessional or dishonorable conduct. In criminal cases it is not well to anticipate the processes of criminal law. The latter feature of our legislation has been instrumental in protecting the people from the professional charlatan in several states. Its provisions should be incorporated in all statutes regulating medical practice.

Owing to the difficulty in securing indictments and the consequent tardiness of legal processes the penalty for violations of the provisions of this form of legislation should be by penalties imposed by a justice or a municipal judge; the latter method has given satisfaction as far as I am aware. Reasonable efficiency upon the part of the officers of these boards have been awarded by a full compliance with the provisions of this form of statute in all instances. The Governor should have the appointing power, being responsible for the successful operations of the different state boards. Experience satisfies us that the so-called mixed boards are doing satisfactory work and operating in perfect harmony. Seemingly no excuse exists for the duplicate boards operating in a very few states. At present approximately thirty states possess legislation regulating medical practice. Seventeen states have a form of statute that fails to recognize the diploma as evidence of fitness to practice; consequently they may be classed with those states operating under efficient acts. In the latter class of states I particularly desire to call your attention to the results of work thus far accomplished. In a paper read before this learned body, at Detroit, Michigan, in 1892, I suggested the future influences of these boards as most important in shaping the future medical education in this country. I submit data at this time confirmatory of the position then taken and reaffirm my former suggestion that future legislation will in a great measure determine and govern the work of the teaching bodies of the country.

I am deeply indebted to the officers of the various boards for courtesies extended and regret that space forbids reference to many suggestions and conclusions arrived at in the work of the different boards.

Data have been obtained from the following named states: Alabama, Minnesota, Maryland, North Dakota, North Carolina, New York, New Jersey, Virginia, and Washington.

The subjoined table indicates briefly the work of these boards.

State.	Examined	Licensed	Rejected	Per Cent.
Alabama.....	647	558	89	0.862
Maryland.....	150	105	25	0.806
Minnesota.....	641	499	142	0.778
New York.....	967	797	170	0.824
New Jersey....	447	417	30	0.955
North Carolina	615	508	207	0.71
North Dakota.	81	76	5	0.938
Virginia.....	835	613	222	0.734
Washington...	207	167	40	0.806
Totals.....	4670	3740	930	0.822

It will be observed that of four thousand six hundred and seventy persons examined but eighty-two and two-tenths per cent. were successful in securing a license. The nine hundred and thirty unsuccessful applicants have, we doubt not, principally located in states not protected by this form of legislation.

I am pleased to direct your attention to the good work of the Minnesota board. The first act regulating medical practice in this State became operative in March, 1883. It was the form of legislation at present in force in Illinois. It was in operation five years, being supplanted by the present law. The present act requires an examination of all persons commencing the practice of medicine and as amended by the last legislature, the minimum of requirements is changed, demanding that all graduates of later date than 1898, furnish satisfactory evidence of having attended at least four courses of lectures in different years, of not less than six months duration each.

We have in Minnesota a practical illustration of the position taken in my former paper: "that in medical legislation we have the only solution of the problem of higher medical education." Having drafted these bills and by force of circumstances been somewhat conspicuously aggresive in urging their enactment, I have, in consequence, witnessed their operations with some concern and interest. The result is all that the most sanguine could have anticipated. In a period of twelve years the proportion of physicians to the population in Minnesota has been reduced from one practitioner to every six hundred and fifty in 1883 to one to every one thousand in 1895. The State has been substantially rid of the travelling charlatan. The present able secretary, Mr. McDavitt, informs me that the medical census just completed is accurate and that the present operations of the law is quite faultless. We therefore conclude that in one State at least the number of physicians has been reduced to a number commensurate with the demands of the people.

The work of the New York board is attracting considerable attention. Notwithstanding pronounced opposition and many embarrassments the act is destined to strengthen the character of the profession in this state. From advance sheets kindly furnished for use in this paper, I observe the following verification of a position taken by the Secretary, James Russell Parsons, in his 1893 report. He reiterates that the records of the past year conclusively prove the position taken in 1893 report, "That the new law proves a barrier to the ingress of the incompetent, has operated to raise the standard of preliminary education, improve the methods of teaching and terms of study of the different schools of medicine."

The following resolution from the president and secretary of the board to the State Medical Society is significant and should meet the approval and support of every member of the profession of this great state, "*Resolved*, That in the opinion of this Board the best interests of the public and medical profession would be materially advanced by gradually increasing the minimum of requirements as to general preliminary education till no candidate be entitled to matriculate in 1897 at a degree granting medical school in this state, that has not completed at least a full high school course."

I am pleased to note that this bill has already passed the senate in New York and is in a fair way of becoming a law. If it becomes operative it will operate to improve the character of matriculate in New York schools and will be followed by similar legislation in other states. Greater coöperation is necessary between different state boards, as it is essential that harmony of policy exist as far as practicable. As in foreign countries their relations to the profession and teaching bodies is most important, their functions being that of professional censors of the conduct of the members of the profession, and guarding at the same time the avenues of entrance to professional work. It being the duties of these boards to protect the people from professional incompetency and charlatanry the duties are briefly comprehended in the performance of the following duties: 1. In establishing a minimum curriculum for all colleges whose alumni apply for a license to practice. 2. The individual examination of all persons wishing to practice medicine in the commonwealth. 3. A professional censorship, granting the right to refuse or revoke a license for incompetency and gross unprofessional or dishonorable conduct.

As this form of legislation becomes more fully understood and appreciated by

the better class of schools, it will be observed as one of the most certain and reliable avenues of placing before the profession of the country the character of work being done in all colleges whose alumni apply for a license. A school doing honest work has little to fear at the hands of these boards; upon the contrary, as suggested in my former paper, it will be found that the proportion of applicants able to pass successful examinations will be a certain index of the character of instruction afforded students in the respective schools.

While the proportion of applicants successful is only eighty-two per cent., it will be found that from the schools heretofore operating under a high grade of requirements that, thus far at least in the work of these boards, nearly all graduates are successful in obtaining a license upon examination. In substantiation of this conclusion I again submit data, using therein the same schools as in my former paper.

The following table indicates the proportion of students successful on examination from alumni of schools heretofore operating under three years' curricula:

Colleges.	Examined.	Licensed.	Rejected.	Per cent.
Harvard	31	31	0	1.000
Columbia	123	118	5	.952
Univ. of Penna.	126	123	3	.976
Univ. of Michigan	83	78	5	.940
Northwestern Univ.	26	22	4	.846
Univ. of Minnesota	149	148	1	.992
Totals	538	520	18	.964

I cannot but conclude, gentlemen, that efficient medical legislation will operate to bring about the following results, as applied to the profession and public:

1. It will protect the people by affording a profession of greater intelligence.

2. It will suppress charlatanry.

3. It will reduce the number of persons practising medicine to a number commensurate with the demands of the people.

4. It will reduce the number of medical colleges, at present far above legitimate demands.

5. It will raise the general standard of professional fitness, assuring us a professional prestige in the future becoming the most important of the learned professions.

In conclusion, we appeal to the profession to renew their efforts in securing efficient medical legislation, believing its operations will result most beneficially to both the public and profession.

DRIFTING, WHO, HOW, WHITHER.*

LEARTUS CONNER, A. M., M. D., Detroit, Michigan.

The study of medical sociology exhibits a drifting in the matter of consultations. Rightly considered, the medical consultation is the "holy of holies" of associated work. He only can enter it aright, who, in the words of the Great Teacher, "hath clean hands and a pure heart; who hath not lifted up his soul unto vanity, nor sworn deceitfully."

Its history shows that the medical profession has ever taken the greatest interest in the qualifications of those seeking its fellowship. Not all calling themselves "doctors" have been admitted within its fold and many have been ejected therefrom who have entered by ways other than the strait gate.

Because of its jealousy of the proper character of its membership, the laity have termed the profession intolerant, bigoted, and narrow—so little has the world ever comprehended the sacred trust assumed by the physician.

The medical profession holds as sacred all knowledge acquired in the performance of its duties; it suffers in silence that the sick may recover health; it endures misrepresentation and obloquy because its nature and purpose are exalted above popular comprehension; it must be clean in thought, pure in life, and unselfish in work, if it would most effectively accomplish its purpose. Hence the necessity of ever keeping its ranks free from those lacking these qualities.

Differing standards of admission to the

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medical profession have prevailed in succeeding ages, different countries, peoples, and civilizations; but each has had some standard for both admitting and expelling members. No physician was ever burned at the stake by the medical profession for holding diverse views on matters of medical theory or practice, but many have been ostracised and regarded with contempt.

The standards of professional association are partly written, but more generally unwritten. Our written standard was adopted in 1847, but our unwritten one traces its origin to the first medical-man, being inherent in the nature of the medical profession—a part of the medical training. The son absorbed from his father, or the student from his preceptor medical knowledge, morals, and etiquette, and transmitted the same to their sons or students. Thus from hand to hand, mouth to ear, hand to eye, the real standard by which we accept or reject professional fellowship, has come to us as a direct personal testament from generations far antedating the earliest historic record.

The Roman Catholic Church regards the medical profession as *the* profession, all else but fragments, and in this respect it concurs with the estimate of itself by the profession. It is a gigantic tree whose germ sprouted when human beings first needed relief from suffering, whose leaves have been for the healing of the nations, and under whose sheltering bows the worn and distressed are protected from the scorching heat of life's physical diseases. The question before us is what shall be the relations of the medical profession to the "sects" and "isms" as homeophathy, eclecticism, etc? The code of ethics adopted by the American medical profession in 1847 makes the specific statement, that all professional association with members of these sects is derogatory to the medical profession. To "aid or abet" in the education of the believers in these sectarian views is also regarded with similar disfavor. For many years some have doubted whether ostracism was the wisest method of dealing with these sects. The number of doubters has, from year to year, so multiplied, that the student of medical sociology notes the change with increasing interest. He is led to inquire whether this drifting, starting in city and country, upon the mountains and in the valleys, from thousands of active centers scattered throughout the entire land, will finally lead the profession, to unitedly accept some method of dealing with medical sects, creditable to all and promotive of the best interests of the profession and humanity, or cause it to return to the primeval principal of an honorable fellowship, thoroughly trained in medical science and art.

Of this drifting we briefly note a few illustrations.

First in the matter of medical education.

When all medical colleges were manned by regulars, homeopaths and other sectarians obtained their scholastic education at these schools. Later the sectarians were able to educate their students in their own colleges, hospitals and dispensaries. When medical departments were established in state universities, the sectarians sought a position in the same, that they might teach their peculiar view. Notable among the institutions where this end was sought is Michigan University. Shortly after its foundation the homeopaths induced the State legislature to instruct the board of regents to place in the regular faculty a professor of homeopathic meteria medica and practice of medicine. For many years the agents refused to accede to this instruction; nor did they yield until it became an alternative of a sectarian professor or no university appropriation from the legislature. At this juncture the Michigan State Medical Society arose against the alliance and protested with such force as to cause the authorities to pause. The matter was at last carried to the American Medical Association and settled by the passing of a resolution to the effect that it was as derogatory to educate sectarians as it was to consult with the same after they were educated. The regents now set up a distinct homeopathic college (on paper). The phrase on paper is used because the homeopathic students still continue to be taught by regular teachers in the following subjects, *viz.*, chemistry, physiology, anatomy, bacteriology, hygiene, physiological chemistry, physics, pathology, histology, etc. That the regular professors should not be compelled to sign the diplomas of sectarians a new scheme of issuing university diplomas was adopted, by which no professors names appeared

thereupon but only those of the president and secretary. It will thus be seen that in spite of the resolution of the American Medical Association, the regular faculty have been and are constantly engaged in educating those whom they know to be sectarians in medicine. As this arrangement is universally acquiesced in by the profession, it is clear that in the matter of educating sectarians there has been a great drifting.

Of interest in this connection is the present agitation respecting the Homeopathic Medical College at Michigan University. Under the arrangement described this college failed to commend itself to the homeopaths, so that the members of this sect practically repudiated it. Hence its classes so diminished as to compel the regents to seek some other method more satisfactory to all parties. The plan which thus far has seemed to meet the wishes of the regular faculty, the board of regents, and a portion of the homeopathic faculty was the abolition of the so-called Homeopathic Medical College and the placing of a professor of homeopathic materia medica and practice of medicine in the faculty of the regular school. The final decision has not yet been announced. But that the deans of both the regular and homeopathic faculties, and the regular physician on the board of regents should unite in seeking to place on the faculty of the regular school a homeopathic professor, is significant of a drifting quite startling, and the more so as no public protest has been made against it by the regular profession. Other State universities than that of Michigan having medical departments are arranged along similar lines. These are all more or less responsive to the demands of the popular will, and this will, generally speaking, demands the full recognition of one or more of the "pathies" and "isms."

The first extensive revolt against the written law under consideration occurred in New York. It was preceded by an extremely bitter conflict and caused not a few ripples in the American Medical Association. The result of this revolt was that the friends of the written law established the New York State Medical Association and retained their allegiance to said law, while the opponents captured the old State Society, abrogated the written and returned to the unwritten law. To many this seemed a revolutionary proceeding, but when it is remembered that the revolting faction simply returned to the first principles of the medical profession, principles which satisfied the profession during thousands of years, the matter assumes a different aspect. The reformers only abrogate the written law of 1847, preferring the larger individual liberty of the profession anterior to that date. Previous to this, Massachusetts had a contest along similar lines, which resulted in affording sectarians equal rights with regulars, and turning popular prejudice against the medical profession.

The Mississippi Valley Medical Association gives its members entire freedom in the matter of consultations. Other medical societies in other places have taken similar action, notably in Chicago, Cleveland, etc.

An extensive knowledge of the habits of prominent physicians leads to the conclusion that a fat consultation fee is rarely refused because the attending physician is a sectarian. Personally the writer has often been told by colleagues that he was a fool because he regarded it a matter of gentlemanly honor to obey the spirit and letter of the law of consultations while he retains membership in societies having this law as a condition of membership.

Another marked illustration of this drifting was seen when a committee of its own appointment reported to the American Medical Association that it favored such alteration of the code of ethics as would permit consultations between all physicians properly educated, legally qualified to practice medicine, and of honorable reputation in the place where they live. When it is remembered that the committee so reporting individually obeys both the letter and spirit of the code bearing upon this point, it will be evident that their report indicates a drifting of the medical profession.

This drifting is farther seen, in that regulars and sectarians work side by side on boards of health, state and local, and on boards of other state institutions. This very imperfect sketch shows that, whether we like it or not the fact cannot be disguised, the professional relationships of regulars and irregulars are, at many points, multiplying and extending. If, finally, through these relationships the

sectarians shall be swallowed up by the medical profession, history will simply repeat itself. Within the memory of living physicians, specialists of all sorts were ranked as "irregular," and with them were classed "practitioners of massage," "electro-therapeutics," "hydro-therapeutics," etc. Now work in these fields is regarded as the most honorable, and the workers receive the largest returns in money, honor, and fame.

Whither does this drifting tend? The history of the past and the logic of existing social forces point to but one result; *viz.*, the absorption of all ideas that are true and helpful, and all persons who are honest and of good report into the medical profession. To this end larger liberty will be accorded the individual physician. He will be permitted to choose his professional associates from among those whom he knows to be properly educated, legally qualified to practise medicine where they reside, and of good report. Qualifications other than these will be regarded as purely local and temporary in their necessity and temporary in their existence, and to be controlled entirely by the individual physician. It were wiser to object to consultation with a physician because of known ignorance, lack of skill, dishonest methods, or disreputable character, than because of his sectarian name. Objection on the first ground is readily understood by any layman, but objection on the second fails to commend itself to most persons, and not infrequently brings the objecting physician into discredit.

The medical profession originated in the effort to systematically relieve human suffering and promote human health. Amid the glimmerings of dawning science, it jealously guarded each addition to its knowledge and incidentally contributed largely to the advancement of science. In every age parasites have sought to ally themselves with the medical profession that they might use its resources to plunder a suffering, credulous humanity. To exclude such parasites from the profession has ever occasioned perplexing thought, and for this purpose the unwritten custom of centuries was maintained, and to add still more in the same direction, in 1847, the American Medical Association adopted the written law of consultations now in force. But from the facts presented it is clear that at the present this law fails of its benificent design. Large bodies of physicians no longer regard the written law as in accord with the nature of the medical profession, and believe that this law should either be abolished or made to accord with the changed condition of our environment.

Apparently, if the profession is to present a united front to the world on this matter, a new statement must be made, satisfactory to the majority. All agree that the profession should be kept intelligent and clean, but all do not now unite upon a practicable method for attaining this end. Until such a method is devised and adopted with substantial unanimity, the drifting will continue; a drifting from a position incomprehensible by the laity towards one clear to every person; a drifting from a position calling for defence and explanation, towards a vantage ground commanding the entire field; a drifting from an indefinite standard towards a definite one; a drifting from a position affording no hope to those outside its circle, towards one giving hope to every intelligent, honest practitioner; a drifting from a position which loses the good work done by institutions other than its own, towards one in which it can absorb all good work, wherever done, and all good workers wherever trained; a drifting from a position of inflexible definition towards one of intelligent accord with forces animating the medical profession.

Urging on this drifting are very antagonistic elements. Physicians of the purest motives and highest character coöperate with those of selfish character and despicable motives. Promoting this drifting are state university medical schools, state medical examining boards, state and local boards of health, specialists, physicians, avaricious for fame, power or wealth, irrespective of the means by which they may attain their ends, and physicians jealous of professional honor and unselfishly serving humanity.

All these however are but instruments of far larger forces, which form a part of the development of the medical profession as a portion of the nineteenth century civilization. Of these we note briefly the following. First—The intellectual atmosphere of the century has become softer, as seen in the diminishing asperity in religious, social, scientific, political and

medical circles. Quite generally, we are learning that our opponents may be gentlemen, scholars, and valuable citizens, while vigorously opposing our individual beliefs and practices. Significant of the quality of this atmosphere was the meeting at Chicago of the representatives of all religions, and their discussing, under one roof, each others religious tenets. This atmosphere of free thought and untrammeled practice has stimulated men to expend their energies, without diversion, in the investigation of new fields or enriching old ones; to develop good rather than destroy evil; to prevent infection more than to cure the infected; to establish the conditions needful to produce level-headed physicians, rather than fight sectarian titles.

Second—With the advancing century humanity has acquired a larger faith in the ability of truth to look after its own interests, if only each individual did his own life-work in the most perfect manner. Hence, physicians have been disposed to give plenty of rope to the offenders of truth, in the belief that thus they will best dispose of themselves after the classical method of Judas Iscariot.

Third—The rapid incubation of physicians, by emigration of the products of the doctor factories of other countries, (an importation which pays no government duty), and by the swarms yearly graduating from the medical schools of the United States, has swelled our ranks to quite uncomfortable proportions. The situation is still farther aggravated by the fact that vast numbers of patients, which naturally should contribute to the support of physicians, are largely absorbed by hospitals, ambulances, dispensaries, contract physicians, railway physicians, accident insurance companies, medical college clinics, and numerous private institutions supported by shrewd advertising. This crowding compels each physician to cultivate his field to the fullest degree possible. He is compelled to know all about the sectarians as well as the physicians of his field. This close contact has proved that some sectarians are better educated, more gentlemanly and honorable than some regulars. This personal knowledge renders it possible for him to coöperate with the sectarians in the management of cases in which they have a mutual interest and profit. Except for the crowding, this knowledge would have been difficult of attainment; now it leads him to believe that professional character and ability are of higher importance than a sectarian name, and so powerfully drifts him away from the written law of consultations.

Fourth—Experience has shown that the fighting of a name, as that of a sectarian, is unprofitable to the fighter and the medical profession. Here, as elsewhere, "The blood of the martyrs is the seed of the church." Persecution of sectarians, under their official designation, but increases their prosperity and discredits the medical profession. The profession is drifting to the practice of ignoring the special name and of looking after qualifications for doing creditable work, of persuading individuals to abandon untenable errors in theory or practice, or better still, of so training medical students that they will avoid "isms" and "pathies," and intelligently enter upon their relations with active physicians.

Conclusions.—1. In the matter of consultations the medical profession is drifting from the law written in 1847 to the unwritten law inherent in the medical profession since the first doctor entered upon his work—far anterior to any historic record.

2. This drifting was inaugurated and is continued by forces and agencies which have made the nineteenth century the most remarkable in history—individual men or institutions have merely served as instruments for the operation of these forces and agencies.

3. There need be no anxiety concerning this drifting. The medical profession will always remain anchored to its fundamental nature of a competent honorable brotherhood. The changes sought are merely the substitution of a thing of universal application for a sectarian name of limited scope. It is sought to exclude from fellowship all who are incompetent or disreputable, whether they have or have not a sectarian name. The final attainment of this drifting will mark a far higher standard of professional life, and a truer exemplification of individual liberty.

4. It is believed that we are drifting towards the practical adoption of the following: "Every physician shall be deemed eligible for professional consultation who has shown that he has such pre-

liminary training as enabled him to comprehend the study of medicine; has fully mastered the elements of medical science and art; has complied with existing laws respecting physicians in the state of his residence; and who has maintained an honorable reputation. Of these qualifications the physicians of his locality shall be the final judges. If those who know him best endorse him, then shall he be freely admitted to membership in all medical organizations and be eligible for consultations."

5. If the profession fails to agree upon a statement in substance like the preceding, the logic of events points to a rejection of the entire written law of 1847, and a return to the unwritten law of previous centuries—the one now holding sway in all countries except the United States.

OSTEO-LIPO-CHONDROMA OF THE UPPER END OF THE HUMERUS; RESECTION OF HUMERUS.*

THOMAS R. NEILSON, M. D., PHILADELPHIA, PA.

The case is that of a young man who suffered from a tumor involving the head and upper end of the shaft of the right humerus. I saw him first in the early part of last February. His history was as follows: J. T. P., twenty-one years of age, worked on a farm until two years ago, when he learned the trade of electrical construction, in which his work has been light. Family history good; no history of tumors among relatives. In June, 1893, his attention was called by a fellow-workman, who saw him stripped, to an enlargement of the humerus the size of a pigeon's egg. One year later it had slowly grown to twice that size. Afterward it grew more rapidly, and in November, 1894, it began to cause inconvenience by its size—limiting the motions of the joint, and giving rise to a sensation of numbness occupying the back of the arm as far down as the elbow; there was also loss of sensation in the fingers, and he noticed some diminution of power in the hand, especially in using the hammer. At no time was there any pain in the growth. There was no history of injury to the shoulder.

Upon examination I found the upper end of the humerus markedly enlarged, the growth being hard and immovable and having an irregular surface, the larger portion of it projecting inward toward the axilla, and preventing complete adduction of the arm. From the history, the slowness of the growth, the absence of pain, the irregularity of the surface, and the uniform density of the mass, I believed the tumor to be an enchondroma, and felt that resection was to be advised. In this opinion Prof. Ashhurst, who kindly examined the patient for me, concurred.

The patient was admitted to the Episcopal Hospital on February 7, 1895. The measurements of the right shoulder as compared with the opposite side were as follows: Around the most prominent part of the head of the bone, just below the acromion (arm adducted), right, 18 inches; left, 15 inches; two inches below the acromion (arm adducted) the circumference of the right shoulder was 14¾ inches, and of the left 12 inches.

Operation. On February 13, with the assistance of my colleagues, Drs. Harte and H. C. Deaver, I resected the growth by the deltoid flap operation. Starting my incision at the tip of the coracoid process, I carried it downward along the groove between the deltoid and pectoralis major, and then across the arm to the outer side at the level of the insertion of the deltoid. I next dissected back the skin and superficial fascia about an inch for the whole extent of the incision, and then divided the deltoid transversely about two inches above its insertion. The flap being turned back, the tendon of the long head of the biceps was freed from its groove and held to one side, the capsule of the joint opened,

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the insertions of the supra and infra-spinatus and teres minor severed, and the attachments of the sub-scapularis divided. The growth was so large thas it was found impossible to complete disarticulation until the attachments of the coraco-brachialis and of the pectoralis major were also divided. This being accomplished I sawed through the humerus just above the insertion of the deltoid. After making the section I noticed a suspicious spot of degenerated tissue remaining, and, pushing back the periosteum with the insertion of deltoid, I cut off another inch of the bone.

Throughout the operation there was no arterial hemorrhage of moment, only a few muscular branches requiring ligature; but the cephalic vein was, unfortunately, slightly torn at the beginning of the operation while pushing it aside in the groove between the deltoid and the pectoralis major, and again later when delivering the growth. I tied it below the tear, and again some distance further up, and resected the intervening segment—about five inches in length.

This being done, the wound was flushed with normal salt solution, and the deltoid united with several quilted sutures of kangaroo-tendon. A large rubber drainage tube was inserted, and the wound closed with silk sutures. A bichloride-gauze dressing was applied and the arm bandaged to the side, a large axillary pad supporting it.

The patient did remarkably well and the wound healed kindly.

There was no noteworthy occurrence until the eighteenth day, when it was found that, at a point about the centre of the wound just over the anterior axillary fold, the union had broken down, and there was a slight purulent discharge. The cause of this was found to be one of the kangaroo-tendon sutures, which was working its way out. Four days later another of these sutures was discharged from the little sinus, and again in five days a third one. The sinus then healed firmly.

On March 30th the patient was discharged from the hospital. At that time the contraction of the deltoid showed that it had united firmly, in spite of the fact that three of the kangaroo sutures had cut their way out, owing to imperfect sterilization.

The patient has now very good motion of the arm, and he tells me that he has returned to his former work at electrical construction. The specimen shows the tumor to be nearly twice the size of the fist, and to have grown largely toward the inner aspect of the bone. A section of the growth was examined by Dr. Joseph McFarland, pathologist to the Hospital, who reported the microscopical diagnosis to be osteo-lipo-chondroma.

DEFORMITIES FOLLOWING FRACTURES OF THE SHAFTS OF BONES, WITH OBSERVATIONS ON THE TREATMENT.*

THOMAS H. MANLEY, M.D., NEW YORK.

Serious fractures of the shafts of long bones constitute a considerable proportion of all the major traumatisms of the body. Many are attended with danger to the vitality of the limb by such destruction as may lead to ultimate gangrene; while a considerable number leave various grades of deformity, with or without shortening.

Deformity after fracture is dependent on various causes, some of which are preventable and others are not. These have reference to local conditions, the quality of the fracture, the age of the patient, the state of the general health and the treatment instituted.

Fractures which extend into a joint or involve an articular diastasis, or subluxations with an extensive laceration of ligament and tendon, are liable to unite with an excessive callous formation and more or less distortion of contour.

In one class of fracture-deformities but little functional impairment or diminished strength is experienced, while in fracture

*Author's abstract of paper read before the American Medical Association, May, 1895.

dislocations ultimate impediment in action is the marked characteristic. This it notably the case in the typical Potts' at the ankle joint, Colles' at the wrist and elbow-joint fractures where the bone gives way through the condyles of the humerus. Under many circumstances we are obliged to content ourselves with endeavoring to save the damaged limb, quite irrespective of the quality of deformity.

Preventable causes of deformity are neglect, or want of skill in treatment. In all simple uncomplicated fractures the tendency of the fragments is to fall into place and unite without resulting in displacement; but in certain varieties in order to prevent distortion we must anticipate those conditions which lead to it. This is only possible through a familiarity with the various phases of osseous regeneration, which can only be acquired by a knowledge of the correct principle of fracture-therapy, with ample opportunity to observe and treat a large number of cases.

Theoretically the successful treatment of a fracture is the essence of simplicity; for, mechanically, there is no displacement which we cannot overcome and no shortening that may not be obviated. But when we bear in mind that we are dealing with living structures which, after injury possessing but a feeble vitality, are not prone to bear pressure well; that the tolerance of the tissues or structures to manipulation widely varies; and that commonly we have to deal with severe internal injuries simultaneously, the problem is not so simple.

In strumous and rickety patients union may be greatly delayed or be very imperfect. In others again it may fail for weeks and then for some unknown reason ossification will suddenly set in and consolidate the fragments in a few days. Where there has been but slight damage to the overlying parts in young subjects, and perfect reposition is possible, complete consolidation may occur in one week. Therefore if we relax our vigilance and fail to provide proper support at the right time, a deflection or displacement is quite certain to result. This is most liable to occur when plaster-of-Paris is employed, because the gypsum dressing fails to hold the fragments steady after the swelling of the limb subsides; nor can it be well removed without jarring the limb. It so hermetically conceals everything that nothing short of its entire removal will enable us to frequently examine the limb during the course of treatment. In fractures of the femur the patient's health, failing under compulsory confinement to bed, may so suffer that we are obliged to raise them and relax their supports before final consolidation, when by so doing the tendency to overriding or bowing of the fragments will be greatly enhanced.

SURGICAL MEASURES FOR THE RELIEF OF DEFORMITIES AFTER FRACTURE.

As it is true that deformity cannot be prevented in a considerable number of fractures, it is equally so that but comparatively few can be overcome after union by surgical measures, except in occasional cases at the elbow in youths. For those fractures extending into joints little or nothing can be promised by surgical operation in the way of overcoming a deformity, though for the impediment in function, by anchylosis or wasting, very much may be accomplished.

Surgical operations which may be utilized to overcome this class of deformities may be technically divided into: 1, Osteorection; 2, osteoclasis; 3, osteotomy; 4, osteectomy.

The first two may be utilized safely and with advantage in a large number of cases, while the two latter are not to be employed unless the extent of deformity is great, or is a source of constant pain, or seriously impairs the limb. At any stage of fracture treatment before ossification is complete we may employ osteorection—a bending of the bone—with great advantage. In certain femoral cases with marked bowing and shortening, utilized at the proper time it is marvelous how we may by a simple bending of the shaft into line, at once restore symmetry and normal length.

Osteoclasis, or re-fracture, succeeds well in the smaller bones of growing subjects, but with the large bone shafts, as the femur, while we may succeed in effecting a re-fracture, it may not be at the right point to be of any benefit and, besides, in applying the necessary force we may do serious damage to the large blood-trunks or to nerves which are in near contact. The period at which osteoclasis can be utilized with advantage and safety is in the transitional stage from the

endo-chondral to ossific development while the callous is yet succulent and pliant. After the consolidation is complete and the hardening stages are past the most certain and reliable success of fracturing a bone over the site of a recent fracture is to resort to osteotomy.

This, it should be remembered, in this class of cases is a severe procedure which is by no means uniformly successful in its results. In some the extent of reaction, local and general, is very great. In the femoral deformities of the adult the extreme intolerance of the medullary substance to mechanical interference renders it an operation of great uncertainty and always full of peril. It will do better in the bones of the leg and upper extremity. The most rigorous asepsis must always be observed, and we should have a care that no irritating chemicals or hot water come in contact with the osseous elements.

Oste-ectomy, or excision of the bone-substance, is rarely required in deformities of the shafts after breaks; but in three difficult cases of clavicular fracture, with resulting hyperostosis and displacement attended with arm paralysis from pressure of the callous on the brachial plexus, it has served me a most useful purpose. Like osteotomy, it is a severe undertaking which should not be resorted to unless its indications are clear and the environment of our patient is such as will warrant the risk which it always entails.

To recapitulate, it may be said that in this class of surgical cases, as in many others, "an ounce of prevention is worth a pound of cure"; that the main object is to endeavor, if possible, in all cases to obviate deformity in the primary stages of treatment; and when one has any doubts as to his own ability to properly manage a complicated case, it will tend to safeguard his own reputation and will be in the interests of his patient if he summons an experienced surgeon. When there is reasonable ground for believing that a marked deviation is setting in, active, early interference will in many cases readily correct it, while if permitted to remain until solidification and eburnation are advanced, nothing short of a major operation, quite on a par with an amputation, can even give us hope for restoration of contour and full functional action in the now distorted limb.

REMARKS UPON TREPHINING THE CRANIUM.

JOHN ASHHURST, JR., M.D.,* PHILADELPHIA, PA.

I find that I have performed the operation of trephining the skull forty-one times, not including those cases in which I have merely opened the frontal sinuses, nor those in which I have removed bone-fragments without using the trephine. Of these forty-one cases twenty ended in recovery and twenty-one in death, showing a mortality of little more than 50 per cent. In many instances I have refrained from interference when other surgeons would have operated, so that my cases have been of an unfavorable type, and the mortality has no doubt been higher than if I had operated more indiscriminately.

The details of these cases are as follows: Twenty-four were primary operations for compound fracture, with eleven recoveries and thirteen deaths; two were operations during the intermediate period, both successful; and three were secondary operations, with one recovery and two deaths, both in cases of abscess.

As far as it goes this analysis confirms what has so often been pointed out, that there is not so much urgency in operating as upon compound fractures of the extremities. In the latter, the sooner the operation is done, if the patient is able to bear it, the better. This has long been the rule in military surgery when amputation is required, and some years ago I collected extensive statistics from civil practice which showed that the same rule of procedure applied there. But this is not so

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in compound fractures of the skull, and the proportion of recoveries is larger in delayed cases than when the operation is done immediately, as is well shown by Bluhm's statistics. At the same time, in a bad case, where an operation is evidently necessary, I do not advise delay; but early trephining is not so imperative as is early amputation for compound fractures of the long bones. Trephining for suppuration, occuring as the result of injury, is usually fatal.

In three cases I have operated for syphilitic disease, with two deaths and one recovery. In the latter case, besides evidence of syphilitic brain disease, there were painful nodes on the skull, and I operated by dividing the nodes with a Hey's saw, and then made a single opening with the trephine, so as to relieve the intracranial tension. The patient was much benefited for a time, and left the hospital relieved, though not cured. The fatal cases were in patients suffering from syphilis of long standing, with necrosis and intracranial suppuration.

I have been induced to trephine in three cases of epilepsy, all the patients recovering from the operation. One, an epileptic with suicidal tendencies, came under my care at the University Hospital in October, 1886. After the operation the patient was much benefited as long as he remained under observation. In the other two there was no evident improvement, though both did well as regarded the operation. In a case of melancholia following an old fracture of the skull, trephining gave no relief, and of two cases in which I operated for convulsions, etc., following old injury, one terminated fatally, while no permanent gain resulted in the other.

I have operated unsuccessfully upon three patients for the cerebral complications resulting from disease of the middle ear. Statistics show that many lives have been saved by trephining under these circumstances, but in my own cases, though the abscesses have been reached and evacuated, the patients have died.

Although I have thus operated in twenty-one fatal cases by trephining, in only one case did the operation seem to have been responsible for the patient's death. This case was that of a child with a depressed fracture over the lateral sinus. On removing the depressed bone profuse hemorrhage occurred, and the patient died in consequence. I had not then learned the futility of attempting to check bleeding from the brain sinuses, except by prompt plugging. I have since had four cases in which the longitudinal sinus was opened, and in two of them the patients recovered. In a third, bleeding was readily controlled by pressure, but ultimately death followed; while in the fourth a clot had formed in the sinus, giving time to apply a lateral suture to the divided vessel. This case was an interesting one; it was that of a boy who had been injured by a nitro-glycerin explosion, a piece of the metal being found lodged in the longitudinal sinus, causing a clot as mentioned.

As regards the locality of the injury, I find that of fractures of the frontal bone, omitting those simply involving the frontal sinuses, there were five, with four recoveries and one death. These figures do not confirm the general impression that there is special danger in fractures of the frontal bone. Indeed, much more depends upon the amount of injury to the brain than upon the place of the fracture. In one case the indication for trephining was bleeding from the middle meningeal artery, and in that case the patient recovered. He was an athlete, who, while playing football came into violent collision with another player, sustaining a fissured fracture of the parietal bone. He was stunned at the time, but soon recovered consciousness; in the course of half an hour, however, convulsions came on, followed by coma. He was brought to the hospital, and I applied the trephine, evacuating a considerable quantity of clot; the patient made an uninterrupted recovery.

In cases where there is a marked depressed fracture of the skull, whether to leave it and wait for developments, or to proceed at once, I wish to be understood as saying that I would not push the argument from statistics, and that in cases in which the operation was clearly indicated I would operate at once; but that in cases where there was a doubt in the mind of the surgeon as to whether or not he should operate, a short delay would not be as injurious as it would be in the case of amputation. In cases of impacted fracture my practice has been, as a rule, not to interfere in the absence of symptoms. In cases where there is no opening into the cranial cavity and where there are no cere-

bral symptoms, I think the surgeon is justified in waiting for more definite indications. At the same time I find myself more inclined to operate than I was twenty years ago, on account of the greater safety afforded by modern methods of wound treatment.

I do not recall any case of discharge of brain-matter from the ear, but loss of brain-substance not infrequently occurs at the seat of fracture. With regard to the watery discharge from the ear I have often observed that as long as the discharge continues the patient may do well, but that if it suddenly stops the patient will probably become comatose and die in a few hours; the arrest of this flow seems to increase the pressure upon the brain. Old residents of the Pennsylvania Hospital will remember a case under the care of the late Professor Joseph Pancoast, in which there had been such a free discharge from the ear that it had been collected in a cup to be measured. The cup was found empty in the morning, and upon investigation it was learned that the night watchman had mistaken the fluid for medicine and had administered it to the patient, a tablespoonful every three hours, during the night.

With regard to fractures at the base of the skull, I have not seen any case which I thought trephining indicated. I think that an attempt should be made to prevent infection in these cases by cleansing the ears, and, as far as possible, the nasal and buccal cavities. After securing cleanliness I rely upon the use of calomel and Dover's powder, with hygienic treatment, rest in bed, cold to the head, laxative enemata, etc., and by these means recovery will be obtained in a considerable number of cases.

EXPERIENCES IN THE TREATMENT OF DIPHTHERIA.*

WILLIAM SHAW STEWART, A. M., M. D.,† PHILADELPHIA, PA.

In the limits of a ten-minute paper on *treatment* of diphtheria there is not time to enter into a differential diagnosis of the true and false or spurious and genuine. I will, therefore, trust that you will credit me with a knowledge of the various forms, conditions and characteristics of this disease after being in constant general practice for more than thirty-two years. It was my privilege, while a student of medicine, in 1861, to apply a treatment for this disease successfully—a remedy which has been, with me, most efficacious ever since.

At that time, diphtheria of a most virulent type was prevailing in Western Pennsylvania. The doctors were unable to combat it or arrest its progress. In a village near my home a child complained of sore throat, the family physician was not available, I was requested to see the child, a boy about two years old. The patches of membrane were plainly visible on both tonsils. The only remedy at hand was the Tinctura-ferri-chloridi; a swab, saturated in a solution of the iron, applied briskly over the tonsils dislodged the membrane. Courage was inspired by this result and the application was repeated several times daily until the child made a complete recovery. Another member of the same family took the disease, was subjected to the same treatment and recovered. I was then obliged to leave the locality to attend lectures in Philadelphia, but learned subsequently that a third case in the family succumbed to the disease; the family physician was summoned but failed to effect a cure. I was consequently impressed with the fortunate hit on so valuable a remedy.

Immediately after graduating from the Jefferson College, I went before the State Examining Board and was commissioned Assistant Surgeon in the Army of the Potomac. While in winter quarters I had abundant opportunity to study this disease

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and was led to experiment with the application of the well known styptic which was among the army supplies, liquid persulphate of iron. It proved to be the "sine qua non," and your speaker realized he could truly exclaim "Eureka! Eureka!" After the close of the war, on engaging in general practice and joining the Philadelphia County Medical Society, I was persuaded that it would be an advantage to the profession and a relief to humanity to announce the success attending the new method of treatment. Accordingly I read a paper before the Society. In opening the discussion on the value of the new method, a prominent specialist, who was regarded as an authority on throat diseases, did not hesitate to annihilate the young doctor in his opening sentence, "I condemn the doctor's paper in toto." Such a squelching remark, followed by the assertion that the cases must have been spurious or his statements false, prevented any credence being given to the valuable discovery. I was practically left to pursue my course alone in the treatment of this dreadful disease.

It is now thirty-four years since I began this treatment and I am no less sanguine about the value of liq. ferri sub-sulphatis, and I can now state further that I have never in all these years lost an adult having an uncomplicated case of diphtheria, and only one where pneumonia was the complication and the patient really died from the effects of the latter. Can we expect better results from antitoxine? I must admit, with great regret, that the record is not so gratifying with children, although from comparison I find, even among them, this remedy is exceptionally successful.

The difficulty is in the application. To overcome this, in the families regularly under my care, I impress upon parents and nurses the importance of teaching young children to gargle, using plain water, thus preparing them for an emergency. It is imperative that the membrane should be cleaned from the throat as it re-forms, the swabbing must be not only carefully but thoroughly done. A busy practitioner can rarely find time to visit his patient more than twice a day, so co-operation on the part of parents, nurses and, if possible, the sufferer, greatly facilitates the end to be obtained. The true secret of the successful treatment of diphtheria is to keep the deposits cleaned off and thus prevent propagation—for in the development of the germ seems to lie the devitalizing element.

Internally, a saturated solution, potassium chlorate, in teaspoonful doses (equivalent to about 7 grains) given every two hours, in each dose two drops of the subsulphate of iron, if taken in the beginning, will often arrest the development of the disease, but if the patches have appeared, you dare not rely on internal medication alone, but should immediately resort to the gargle of Monsel's Solution in the proportion of a drachm to the ½ pint of cold or hot water, as is most agreeable to the patient. There is but one rule for the gargle. At each time the patient must not desist until by repeated persistent efforts every particle of the membrane is removed, and repetition every half hour or oftener is necessary. If the patient cannot gargle, there should be the careful application of a swab, saturated in diluted sub-sulphate of iron, making as little abrasion of the mucous membrane as possible, repeated as frequently as needed to keep the disease under control, not permitting the patient to sleep more than two hours at a time during the night or day.

My experience warrants the assertion that faithful, persistent use of this remedy in the manner stated will carry the patient over the crisis of the most malignant attack in from four to five days, provided, the patient comes under your care in the early stages of the disease.

Causes.—This being a practical rather than a scientific paper on this subject, permit me to mention some of the ever possible sources of diphtheria. Putridity arising from decaying vegetable or animal matter in the cellar, house or yard, the decomposing of animal matter, such as a mouse or rat, under the floor or in a heater, as experience has proved, also the unflushed sewer, containing debris from street, public house or private dwelling.

Communicability.—Diphtheria, if neglected in one case, will soon become a nidus from which every member of a household may be infected, but if promptly attended, and the membrane kept cleaned off, there is little or no danger of contagion. In my experience, on more than one occasion, I have been able to determine the nature of the disease before speaking to the patient I have been sum-

moned to see, by the characteristic odor. I remember, during the Centennial being called to see a man who was ill; he had brought his bride from Jefferson County on their wedding trip, to the Exhibition. Stating the trouble to be diphtheria, when I entered the room, shrieks of despair from the bride and demonstrations of grief warned against any further declarations. Being assured that her husband would be well in about five days, she became calm and told me that in their county this disease was an epidemic and almost every case proved fatal. The disease yielded to treatment and the last visit was made on the fifth day. Because of the prompt and successful results in this case an urgent request came through the mail for the name of the medicine which had been so effectual. I need hardly add, it gave me great pleasure to respond, and to give specific directions how to use the remedy.

In this connection, as confirmatory proof of the value of the medicine, I will refer you to a clinical report published in the MEDICAL AND SURGICAL REPORTER, of Phiiladelphia, May 12, 1894, which was quoted from the Clinical Society of Louisville. This is the language of Dr. P. Gunteman:

"I want to give my testimony to a drug that I have used for the last two years, exclusively in the treatment of diphtheria, i.e., the local application of the subsulphate of iron, since the report of some physicians from Bowling Green, Kentucky, whose statement was to the effect that they had treated 250 cases by this method with only one death. I had treated 18 cases and no death." In the discussion which followed, Dr. J. W. Irwin said, "I listened with a great deal of interest to the remarks made by Dr. Gunteman concerning the use of Monsel's Solution, locally, in the treatment of diphtheria, etc., and I had just read an article written by somebody in Pennsylvania, who wrote of the wonderful effect of this remedy, and like every new thing it was lauded to the skies, etc."

The "somebody in Pennsylvania," who lauded the remedy then, is still as sanguine as ever that he made no mistake in proclaiming the virtues of sub-sulphate of iron as a local treatment of diphtheria. Although I have expressed my confidence in the local application of liquor ferri subsulphatis as superior to any other remedy, yet do not understand that I would have you depend entirely upon this powerful styptic. I have at times been obliged to use a blunt curette to scrape off the membrane, afterwards applying cosmoline, sulphur and soothing unguents. In the post-nasal development of the disease, I do not hesitate to pass an aluminum probe through both nostrils, the probe curved to suit, wrapped with absorbent cotton and saturated with whatever the conditions suggest in order to destroy the germs of the disease, which I have frequently found passing along the mucous track and the channels leading from the openings of the eyes and ears. As a final word I would urge upon you not to undertake to treat a case of diphtheria unless you do your work fearlessly, heroically, attentively and thoroughly, and you will not fail in your results.

THE PROTRACTED FEVERS OF WEST TENNESSEE.*

T. R. MOSS, M. D., DYERSBURG, TENN.

In West Tennessee we have a form of fever which, I think, has been more prevalent during the past twenty years then at any time prior to this period. It generally continues about four weeks, but frequently longer when complicated. There has been much said and written concerning a proper name for it but it has never been settled beyond controversy as in other sections of the country is typhoid fever, scarlet fever, or variola, etc., the identity of which no one calls in question. I cannot say if it is clinically the same fever as is met with in other states of similar climatic influence; but I can say, however, that the descriptions which I see from time to time do not correspond entirely with those cases I am accustomed to deal with. That the name typho-malarial as given to a certain fever by Dr. Joseph J. Woodward in 1863, still has its advocates, no better proof can be given than the following, from the pen of the

*Read before the Tennessee State Medical Society, April, 1895.

worthy man, now deceased, whose name appears as President of the Tennessee State Medical Society: "Is Typho-Malarial Fever a Disease Per Se?"

Summarizing I have reached the following conclusions: *First*—The fever we have in this part of the country every autumn is not an acute infectious disease as is typhoid fever. *Second*—Typho is probably due to pathological changes, the result of long continued exposure to malarial influences or theoretically to one or more of the six or eight parasites found in the blood of patients suffering from malarial fevers. To some of these quinine is said to be nontoxic. Typhoid is due to a specific poison. *Third*—The incubation and duration of typho are much less fixed than that in typhoid. *Fourth*—The temperature range of typho is less uniform and regular than that of typhoid. *Fifth*—Diarrhœa is often wanting in typho and rarely absent after the first week in typhoid. *Sixth*—The typho tongue never evidences the gravity of disease that the typhoid tongue does. *Seventh*—I have never seen sordes on the teeth, gums, lips and in the roof of the mouth in typho, but have frequently in typhoid. *Eighth*—I have never discovered the typhoid eruption on the persons of typho-malarial patients. It occurs in eighty-eight per cent of typhoid patients. *Ninth*—Bronchial and pulmonary symptoms are rare in typho, common in typhoid. *Tenth*—The nervous symptoms in typho are absolutely wanting in comparison to their constancy and gravity in typhoid. *Eleventh*—The great pathology of typhoid fever as discovered by the symptoms, existing in a much smaller percentage of cases in typho than in typhoid. *Twelfth*—By the intestinal dejecta typhoid fever is disseminated, but there is no evidence that this is true of the dejecta of typho. Finally, even if the so-called typho-malaria fever of this country is really typhoid fever, the abandonment of the name typho would, in the present status of our knowledge, be premature. Thus it is to be seen, gentlemen, that there are still those who cling to the name typho-malarial, notwithstanding much has been said and written in favor of calling the disease typhoid fever. This fever is no respecter of persons except that those at the extremes of life are probably not so susceptible to its influence.

The onset of an attack occasionally appears to be sudden, but usually it is gradual.

In nearly all cases, if sought for, a history will be elicited of general malaise, loss of appetite, slight fever, a furred coat on the tongue, constipation and headache extending back for one or two weeks. At his first visit the physician usually finds his patient with a temperature from 101½° to 104° or higher, and, by the way, the themometric range at the first visit is quite often a fair index as to the gravity of the case. The tongue is generally red at the tip and edges, the triangular red spot at the tip being the most important sign connected with that organ in the beginning when it is necessary to give an opinion as to the probable duration of the illness.

I regard the red tip and edges of more importance as a diagnostic sign than the pale flabby tongue, on the edges of which the teeth's print can be seen. I frequently meet with this character of tongue, but I do not think it has any great significance in so far as pertains to this special form of fever. The pulse is rather peculiar, in the fact that quite often for a number of days it ranges from seventy-five to ninety, while the temperature is 102½° to 104°. I cannot account for this and would like to know if the experience of others corroborates my own. As the disease continues and the heart's action grows weaker, the pulse increases, buf the temperature curve so characteristic of typhoid fever in its typical form is entirely wanting, and quite often the fever is as high, or higher, at the first visit as at any time thereafter. According to the rule which most fevers obey the temperature is lower in the forenoon than in the afternoon. A temperature of 103½° or 104° in the morning is quite significant, and prompt measures should be instituted to reduce it, else as night approaches it will get very high, probably reaching 105°, or higher.

In some instances the disease is so mild that patients will not remain in bed, but drag themselves around for several weeks with a temperature of 99½° or 100°. In a case of ordinary severity properly treated the temperature ranges from about 102° in the forenoon to 104° in the afternoon, and quite often in addition to the afternoon rise there will be another at some time

during the night, usually between 12 and 4 o'clock. There may be others at irregular intervals but most usually only one or two, coming as stated. These exacerbations are frequently attended with rigors, the patient calls for more to cover him and thinks he is about to freeze when the thermometer under the tongue registers 104½° or 105°, and when in this condition patients will usually protest most vigorously against cold water to the body, and usually a warm water bath will be consented to. In most cases the bowels are not troublesome, but generally laxatives have to be administered to make them act as often as is necessary to the comfort and well-being of the patient. It is often the case that diarrhœa is present and requires something to control it, which usually is not hard to do.

When there is diarrhœa the stools are generally thin and quite offensive in odor, their odor and color indicating an absence of bile.

Intestinal hemorrhage sometimes occurs, and in the cases coming under my observation was rapidly fatal.

There is frequently tenderness over the abdomen and in one case under my care—a little girl 13 years of age—the pain in the iliac region was so marked for several days that I began to suspect appendiciitis.

Tympanites is rarely present to a marked extent, but when it is so, becomes a most formidable symptom. Sordies does not occur except in grave cases attended with hebetude or a low form of delirium. I have never seen the rose colored spots which are of such diagnostic importance in typical typhoid fever, but possibly I have not made close enough search for them in every case.

Neuralgic pains in the chest or back is present in nearly every case at the beginning. As a rule they disappear after three or four days and do not return. Head-ache is frequently present, but usually not marked except when the temperature is high. Delirium is usually absent, but in severe cases where it comes on late in the progress of the disease indicates a gloomy outlook for the patient.

Epistaxis was present at the beginning in the majority of cases which I saw.

Vomiting frequently occurs during the first few days after which it usually subsides. Exceptionally, however, it persists throughout the entire attack, materially interfering with the administration of remedial agents. I just now call to memory a case which continued for twelve weeks which could retain absolutely nothing but fever powders and buttermilk. The patient finally died from hypostatic congestion of the lungs, and heart failure. Bathing even could not be satisfactorily carried on in this instance.

The urine is frequently scant and highly colored, but usually the kidneys are not very troublesome. Venous thrombosis occasionally occurs and when present adds to the gravity as well as duration of the disease. A case is referred to under the head of treatment in which the fever continued 105 days. Venous thrombosis and probably phlebitis occuring first in the left, and afterwards in the right leg.

The history of swampy, timbered countries, when new especially, is that of acute malaria manifesting itself in chills and transient fevers, that as they grow older and the population increases, this gradually gives way and typhoid fever makes its appearance. A quarter of a century ago, chills and the fever which follows them were common, now they are very uncommon. Simple remittent or billious fever lasting from 3 to 10 or 12 days was also quite common, now it is uncommon.

The causes which produce malaria have not all disappeared from the country, but a change has come over the character of sickness, and the question arises, what have we now, and what the cause which produces the change?

In the beginning of my practice calls were frequent for prescriptions for chronic chills; now I don't have six a year. Why this difference?

(1st.) We now have in typhoid fever one which is self limited.

(2.) We now have a form of fever which no known medication will check, but which runs its course in spite of all the ingenuity of man. Typhoid acts similar.

(3rd.) Frequently when it enters a household, one, two, or a half dozen others follow. This is true of typhoid fever.

(4th.) Diarrhœa and intestinal hemorrhage are symptoms which make their appearance in this disease. These symptoms belong to typhoid fever.

(5th.) Venous thrombosis occasionally occurs as a complication with this fever.

(6th.) Epistaxis is present in the majority of cases at the beginning. It is a

symptom of diagnostic importance in typhoid fever.

With the foregoing train of symptoms which I have given as faithfully as I know them, after an experience of fourteen years practice in West Tennessee, and recognizing that some valued sign of typhoid in its typical form are wanting, I desire to ask of this intelligent body of medical gentlemen, shall we denominate this fever typho-malarial or a typical typhoid fever?

Treatment:—I generally begin treatment with an effective dose of calomel with soda. Quite often it is necessary to repeat this two or three times in the course of the disease. Proper treatment and good nursing will succeed in curing a majority of cases.

The nurse should be instructed in the use of the thermometer, and given to understand how to keep a regular record of the case, so that when the physician makes his visits he can get a more reliable history as to the progress of the case.

Patients should not be allowed to lie on feather-beds, mattresses are far better. In one instance an air bed was used, but having been covered with some kind of an oily preparation, though it was dry, the osmosis from the skin towards the bed was so great that in a short while the gown would be perfectly wet and water standing in the depression beneath the body. On this account it had to be abandoned though it was exceedingly comfortable and the patient was very fond of it. It is difficult to use a bed-pan on a bed of any kind. Patient should maintain the horizontal position during the entire attack and when one is stubborn and will not do so, he always suffers in consequence, unless it be a very mild case. Good milk, according to my observation, is the most suitable diet. Sweet milk is more nourishing but most patients prefer buttermilk, and will take it with avidity from the beginning to the ending of a four or five weeks spell. Occasionally persons are met with who can not be induced to take milk under any circumstances, when soft eggs or milk toast, etc. may be cautiously given. In giving buttermilk it should always be perfectly fresh. It is sometime ssurprising how well buttermilk will nourish a patient with this fever. The stomach and bowels are usually free from gas and the restlessness and nervousness are less with a pure fresh milk diet than any I know of.

It is highly important to keep the stomach quiet throughout an attack, because if rebellious it materially interferes with the administration of proper remedies, and a simple case is resolved into one of gravity. In order to do this studiously avoid the use of opium and do not use it if possible to get around it. Opium checks the secretion from the liver, constipates the bowels, and causes them to fill with gas. In cases attended with laxness of the bowels or diarrhœa, opium sometimes renders good service. I use phenacetine to a very limited extent, and rarely give it at all unless the temperature is above 102½°, and then in doses just sufficient to produce a slight moisture of the skin, intending that it shall only act as adjuvant to a more desirable method of reducing fever. Free bathing is absolutely indispensable to a successful issue in the treatment of this fever, except in very mild cases. In private practice however, it is entirely impracticable to follow the Brandt method of immersing the body in cold water, as it requires a number of assistants which are seldom to be had, besides very few patients are provided with bath tubs and still fewer able to buy them.

My custom is to have the water applied to the body as the patients lies in bed; it is best applied by means of soft cloths, bathing constantly for twenty or thirty minutes. Cold or warm water may be used according to the wishes of the patient. Cold water will reduce fever quicker, and when agreeable I prefer it; but with a tendency to cold hands and feet and other evidences of internal engorgement warm water is, I think, safer. When water is applied to the patient one nurse can for weeks frequently give all attention necessary. I have a patient who is now recovering from an attack in which the fever lasted 105 days, and during the whole of this time he was nursed and bathed almost exclusively by his wife. A towel wrung out of cold water and applied to the bowels, covered by a dry one invariably gives quite a degree of comfort, besides it helps to lower temperature and has a good influence in keeping down tympanites.

Of all internal remedies for the reduction of temperature in the protracted fevers of West Tennessee none are to be

compared for efficiency and safety with quinine. The sulphate or bi-sulphate may be used, but unless contraindicated by an irritable stomach or nervous system the sulphate is preferable.

Some practitioners treat this fever with but little if any quinine after the first 3 or 4 days, and mild cases with a low grade of fever require very little, but my observation during fourteen years experience in the treatment of this fever with and without quinine, has convinced me that cases with a high grade of fever treated by antipyretic doses of quinine and free bathing do better than treated by bathing without the quinine. In cases where quinine is required for its antipyretic influence less than 40 or 60 grains in the 24 hours does very little good, and quite often this amount will have to be increased to meet the requirements. Care should be used to avoid depression and sometimes stimulants and nerve sedatives are necessary in order to its successful administration. Usually, however, after it has been given 2 or 3 days the system becomes tolerant of its presence and no more trouble is experienced from it.

The object in its administration should be mainly that of an antipyretic, and inasmuch as a temperature of 101° or 102° does not exhaust rapidly, only enough should be given aided by the bath to keep the fever at about this point. As a rule this can be done without "fever powders." Occasionally the stomach rebels at quinine, and an amount sufficient to reduce the fever can not be tolerated, the nervous system becomes disturbed and through this violent persisting vomiting is induced. I instances of this kind if possible the quinine should be lessened or suspended for awhile, but if not considered safe to do so, then chloral hydrate and potassium bromide suspended in mucilage of Acacia should be given per rectum; but if both the stomach and the rectum are irritable, hypodermic injections of morphine and atropia sometimes act nicely; very often, however, the after effects of the morphine is worse than the quinine.

I have never been very successful in giving quinine by suppository, and never but in one case was I cruel enough to give it continuously by hypodermic injection. Possibly it might be said do not give it at all under such circumstances. It is needless to give such advice as it cannot be given to any advantage, but such cases frequently terminate unpleasantly because one of the best friends of both the patient and doctor has failed, and the chances are that ordinary bathing will not control the fever which is rapidly consuming the body.

If some doctor would invent a contrivance by which private families could immerse their sick fever members in water as often as needed with a limited amount of assistance, he would confer an inestimable blessing on the human race. The wet sheet is about as inconvenient as immersion in water.

Very often a case will be pursuing a satisfactory course when severe rigors, followed by immense elevations of temperature, will occur. It is in just such cases that quinine, if given with a liberal hand, will do a most noble work. Having seen this state of things yield so nicely to quinine and free bathing, and having seen bathing alone so utterly fail, is it any wonder I should consider quinine my friend under such circumstances? Quinine should be given with three objects in view: 1, Reduction of temperature; 2, equalization of circulation; 3, neutralization of any malaria which may arise from time to time on children. It is best to keep a close watch for amblyopia, inasmuch as some are very susceptible to the action of quinine. Amblyopia is not as transient as some authors would seem to think. I know two cases, one of nearly six and one of nearly two years duration, in which the field of vision is very much contracted. Guaiacol has been vaunted as an efficient agent in reducing the temperature in typhoid fever.

An article in *Medical News* of January 19, 1895, from H. G. McCormick, M. D., of Williamsport, Pa., concludes as follows: "I have thoroughly tried the bath and cold packs and I know they have proved very efficacious in many cases, but with my experience with Guaiacol I have no desire to return to either of them." I can not speak from experience. The bowels need attention and if constipated should by mild measures be induced to move every 24 or 36 hours. If diarrhœa is present and the stools offensive opium, bismuth subnit, and salol should be given to check the frequent actions and destroy the odor. Intestinal antiseptics are always indicated, whether there be diarrhœa

or constipation; and I know of no better mixture than carbolic acid. Co. tr. iodine and Fowler's solution, in which is combined both antiseptic and anti-malarial agents. Turpentine suspended in cinnamon water and powd. acacia is a very effective mixture and but little, if at all inferior to the carbolic solution. I have used sulpho-carbolate in two cases only, they did well. I think favorably of the chlorinatep quinine solution of Yeo but have not used it. It is composed of potassium chlorate made strong by hydrochloric acid and water, to which quinine is added and syrup of orange peel to flavor. If this is not too bitter, I think it is worth trying. Dryness of the mouth needs attention; a solution of chloride of sodium is a good wash, and glycerine will help remove the dryness. Exhausting sweats frequently occur late in the disease, for this tr. digitalis with atrophia or tr. belladonna answers a good purpose. Strychnia, alcohol and ammonia have their places in the treatment, and under certain conditions can not be dispensed with; but I will not take up time to dwell on them. Hypnotics are frequently required to produce sleep, and for this I am partial to Wampolea hypro-bromic compound. Venous thrombosis, with its results, requires soothing applications with anodynes to relieve the pain of the accompanying phlebitis, careful handling, and later, electricity and bandaging. I have a case of this kind under treatment at present. After the cessation of fever, prudence in diet, tonics and the avoidance of severe muscular exertion are conducive to a speedy convalescence.

EXAMINATION FOR LIFE INSURANCE.*

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The importance of this subject and the responsibilities connected with it, together with the fact that it has not been a usual one discussed at our meetings, would be a sufficient apology, if any was needed, for the presentation of this paper.

An idea may obtain entrance in the minds of some physicians that no special qualifications are necessary, and but little preparation is required for this work, when indeed the fact exists that in view of the financial interests involved in life insurance, and that the success or failure of the vast enterprise rests almost entirely with the medical examiners, it becomes a matter of great interest, and calls for much thought and careful study upon the part of medical men.

It is notable that the profession is not slow to recognize this, as several medical colleges have instituted special lectures on the subject; books have been written by able authors; instructions are sent out by medical directors of companies to local examiners, and no physician who accepts the office of medical examiner should long remain ignorant of his duties in the premises.

Most companies of any note pay a reasonable fee for examinations, and no member of a great profession, proverbial for its sense of honor, should take up a fee for which he had rendered no just equivalent. And indeed aside from the question of compensation, if we voluntarily accept an appointment or position, we should conscientiously discharge its requirements, or resign.

The object of a medical examination is to ascertain the true physical condition, personal and family history, hereditary or acquired predispositions, occupation and sanitary environments, and the mental and in some larger degree the moral status of the applicant.

In order that information on these lines may be had at the home office, blanks are furnished examiners on which to make the required reports; but while these blanks should be carefully filled in they should be considered as aids or conveniences, and in no sense should they take the place of careful study and inquiry on the part of the examiner.

To sit down and hurriedly run over the questions laid down on the blanks, and

*Read before the Tennessee State Medical Society April, 1895.

write applicant's answers, would in many instances amount to no examination at all. For this reason, the questions are easily understood by medical men, but many of them are without meaning to the average applicant unless they be explained.

Take one or two examples: "Have you ever had peritonitis, or any disease of the abdominal organs?" or, "Have you had stricture of the urethra, enlarged prostate, or disease of the genito-urinary organs?" In a blank before me, I find the following in a column of questions: "Apoplexy, diabetes, delirium tremens, epilepsy, fistula, insomnia, otitis, syphilis, varicose veins, &c."

A few men, who perhaps had given some attention to the study of medical terms, might answer such questions intelligently, but we must keep in mind a remarkable truth that however well posted a man may be in regard to the ordinary affairs of business or social life, he may not, and usually does not know anything about diseases, much less the names given them by the profession.

A physician is perhaps often excusable for using technicalities, for it frequently occurs that he does not desire the patient or friends to comprehend his meaning, or he might be in doubt as to his diagnosis and find it quite convenient to intrench himself by medical phraseology while he awaited further developments. But in examination for insurance, it must be the purpose to make ourselves understood; hence it would be better to ask the questions at once in such terms as we know the applicant can fully comprehend, or else explain their full significance before writing the answers. If we do not he is liable to give an unsatisfactory answer, from one of two reasons, either he does not wish to appear ignorant, or he will regard the questions as important relative to his acceptance, and will answer in the way most favorable to himself.

We must remember that in common practice the patient is anxious to explain everything connected with the disease or accident, and thus aid the physician in ascertaining the true condition; but the reverse is often true in the case before us. A person having once decided to apply for insurance, becomes anxious about it, and in no event does he wish to be rejected; hence the temptation to cover up his health record, or his family history if it be unfavorable, and it need not be expected that he will volunteer information that would be detrimental to his purpose.

Ingenuity and tact, together with a keen insight into human character, are in many instances needed by the examiner to enable him to elicit the facts and arrive at just conclusions.

We should never be content with such answers as "don't know," "female disease," "lingering illness," or, "old age." Such expressions are very confusing to the medical directors of a company.

For instance, "of what did your mother die?" "I do not know," or, "She died of female disease." Such answers would leave the company in great doubt on a vital point, that of family history.

So, if the desired information cannot be obtained from the applicant, search must be made elsewhere; the physician who attended her, or the nurse; if these cannot be found, some friend or acquaintance should be interviewed. I remember on one occasion to have gone nine miles for information relative to the family history of a man, who personally had the appearance of a good risk, but whose mother died in his infancy and he was unable to give satisfactory information relative to his maternal relations, some of whom it was reported had died of consumption. It cost me some time and trouble, but I secured for the company what has proved to be a first-class risk. All sources of information should be exhausted before we write unsatisfactory answers to vital questions.

Many persons know but little about their parents; very few indeed know anything about their grand parents, and such knowledge is sometimes difficult to secure, but we may frequently get the main facts from some old citizen who has known the family and their history through one or more generations.

I would like to state before leaving this part of the subject that an answer which would involve the rejection of the applicant should not be made without due consideration.

To illustrate, "Have you ever had vertigo?" This being explained to mean dizziness, or swimming in the head, he will probably answer, "Yes."

If this answer is so recorded and goes in unqualified, the company will naturally conclude that the "vertigo" is an indication of serious brain or aural trouble,

or apoplexy, and the applicant will be rejected, while perhaps the vertigo was caused by malaria, bilious disorder, loss of sleep, or some trifling ailment.

Very few persons have not at some time had palpitation, but we know that slight disorders of digestion or strong mental emotions may produce it, and if there be no disease of the heart, no irregularity of the pulse, no difficulty of breathing, only a little palpitation at some time, it should not be sufficient to reject the applicant.

In such cases as the above, we would be warranted in giving a negative answer.

"But," you say, "we should tell the truth." That is just it. But what is truth in such instances. It is that the vertigo or palpitation being wholly accounted for by the existence of slight ailments of other organs are mere functional disturbances, and a close examination showing a healthy brain and heart the symptoms referred to should be disregarded, for if answered affirmatively they would mislead the company, and the applicant would be rejected, not upon facts but upon a false conception of the applicant.

Examinations should always be made in private for obvious reasons, and when at all convenient, in the physician's office. When, however, the interest of the company demands it, we must not refuse to go to the house or place of business, for it is important that the examination be made with as little delay as possible after the application is made, otherwise, the party might change his mind, and thus the company be deprived of the business, and the family of the applicant remain unprotected by his failure to insure.

Examinations should never be made in a hurry. The company pays the physician for his work and he cannot do justice to either party in the transaction unless he takes time and acts deliberately.

If the applicant manifests restlessness and want of time, he should be informed that this is a business matter of importance and cannot be lightly treated.

No matter how hale and robust the applicant may appear, a careful physical examination should be made in every case. Previous to this, the applicant should be relieved as far as possible from embarrassment or morbid timidity. This may be done by some general conversation about the weather, business, or society. Then let him divest himself of his outer clothing, and shirt if it be stiff front, and place himself in an easy position. Proceed with the examination, having your own mind concentrated upon the object in view; but direct the patient's attention away from himself towards other objects. In short, it is desirable to arrive at the normal condition, free from all causes calculated to disturb or pervert the functions of respiration and circulation.

The abdominal organs, as well as the heart and lungs, should be submitted to physical examination, as should also the muscular and cutaneous systems.

Great caution must be exercised at this point—business habits, exercise, recreation, sleep, regularity in eating, the use of tobacco and other narcotics should be inquired into; but that which concerns us most is the drink habit. While it would be better if no man drank alcoholics as a beverage, yet moderate drinking of itself does not debar an applicant; so then if he drinks at all, we must find what he drinks and how much, when and where he drinks it, and with whom he drinks.

A farmer or laborer in the rural districts, industrious and frugal, regular in his habits of exercise, eating and sleeping, though he takes his "dram" with as religious punctuality as he attends church, and on certain great occasions becomes convivial and drinks to excess, might be a fair risk. But the man who loiters around saloons in idleness, though he may drink but little, yet is seen daily with the drinking and lawless element, engaging with them in their lives of debauchery and crime, should be promptly rejected because the baneful influence by which he is surrounded is sure to lead to profligacy and drunkenness. So that the line drawn by Dr. Anstie at one and one-half ounces of alcohol, or its equivalent, per diem, might be safe in rare instances—such as the farmer referred to, but certainly would be extremely dangerous if indulged in the ordinary drinking circles of towns and cities and under saloon influences. Therefore no definite quantity can be fixed without considering other factors involved in the habit.

No company ought to issue a policy of any sum whatever, unless the urine of the applicant has been thoroughly tested and found in a healthy condition.

I have repeatedly examined applicants, who in every other respect appeared to be

first-class risks and would be surprised to find the urine highly albuminous. This, if persistant, would necessitate the rejection of the applicant. The same might be said of other abnormal deposits.

It is not necessary in this paper to suggest methods for analyzing the urine, as it is presumed that every practitioner, whether he be medical examiner or not, has in his office the necessary apparatus, and certainly no one would attempt to perform the duties of medical examiner without first familiarizing himself with the essential part of the work.

We should also be assured that no deception is practiced, but that the specimen was passed by the applicant under examination.

There are other matters of importance connected with this subject that must be considered by the medical examiner, but can not be treated of in this paper within the time prescribed.

And while we exercise great prudence and care in every detail before recommending a risk for insurance, it must be remembered that a perfect human being, with a perfect health record, a family history absolutely free from disease or hereditary predisposition, one also who follows an occupation free from danger, and whose habits are above reproach, has never been found on earth since,

"Man's first disobedience and the fruit
Of that forbidden tree whose mortal taste
Brought death into the world, and all our woe,"

and our first parents receiving from Jehovah their marching orders, with much fear and trepidation took their final departure from the beautiful garden of Paradise.

So that due allowance must be made on account of the common frailties and infirmities incident to all the race. Otherwise insurance companies could have no existence, and the large benefits accruing by this wise provision would be lost to mankind.

Insurance companies desire business, and what they expect and require is such material as may reasonably be supposed will live out the ordinary expectancy,

Medical examiners having gained as nearly as possible all the facts, and having carefully reviewed and weighed them must make up their estimate of the case as a whole, and upon this basis, and with the golden rule before them recommend the acceptance or rejection of the risk.

In view of the essential qualifications of a medical examiner, his responsibilities, the necessity of thorough investigation, the demands made on his time by insurance companies, the delicate attitude he sustains both toward the company and the applicant, his fee in no case should be less than five dollars—in some instances more—and should always be paid by the company and from the home office.

THE USE AND ABUSE OF COCAINE IN NASAL DISEASES.*

S. W. SANFORD, M. D., UNION CITY, TENN.

Too often papers prepared for and read at these annual reunions are of such length, and deal so much in theorizing to the exclusion of practical, actual bed-side experience, that we are not benefitted by these meetings as we should be.

I will not take up much of the Society's time with this short article, yet if I succeed in impressing upon the members the alarming extent to which cocaine is used by the laity who are afflicted with some nasal trouble, I will have accomplished my purpose.

It is useless to consume your time in discussing the merits of this drug as a local anæsthetic, as that property is well known to you all, and as such it is indispensable to the oculist, dentist, and those of us who do much nose, throat and ear work. All operations in the nose, such as removing polypi, hypertrophies, exostoses, etc., are rendered painless by the use of a four, six, eight or ten per cent solution, thoroughly applied by a spray, or by saturating a pledget of absorbent cotton of suitable size and carefully applying it to the part to be operated on; or first spray and then apply the cotton satu-

*Read before the Tennessee State Medical Society, April, 1895.

rated with the solution—the latter mode of application being my preference.

I have found that in order to secure complete anæsthesia of the parts it is necessary to keep the solution in contact with it from ten to twenty minutes. My experience is that a ten per cent solution is sufficient, and many patients are so susceptible to the effects of this drug that a four or six per cent solution will be strong enough. I have found some patients who could not bear stronger than a two per cent solution. Although a twenty per cent solution is advised by such authority as Bosworth of New York, I would not use or advise a solution of such strength for two reasons; first, I have never found it necessary; and secondly, I regard the use of solutions of such strength dangerous; for it is a fact well known, that cocaine is very uncertain in its action, even upon the same patient.

The point, as I have stated, that I am most anxious to especially call attention to, is the alarming extent to which cocaine is being used by those who are sufferers from ordinary catarrhal troubles, particularly hypertrophic rhinitis. The fact that this drug so quickly astringes the mucous membrane, thereby giving immediate relief has been recognized and taken advantage of by unscrupulous manufacturers of patent medicines, and the daily papers are full of advertisements of Dr. So-and-So's never failing cure for catarrh, and every drug-store has it for sale. Now it is a fact that nine-tenths of these patent catarrh snuffs contain large quantities of cocaine, combined with menthol, bismuth, carbonate of magnesia and bi-carbonate of soda.

The sufferer from catarrh reads the flaming advertisement of Dr. Blank's wonderful and never failing catarrh snuff, and then goes to the nearest drug store, buys a box containing a powder similar to the above formula, pays an exorbitant price for it, with directions to "snuff a small quantity up each nostril several times a day or as often as needed to keep the nose and head clear." Now thus prepared to treat and cure his catarrh he goes on his way rejoicing and snuffing, and the relief he gets from the annoying and distressing symptoms is something wonderful to him, and he hastens to tell all of his friends who are thus afflicted, and those he fails to see, he sends word or writes to them, and still continues to rejoice and snuff and bless Dr. Blank for his wonderful discovery, and should he possess the title of Rev. So-and-So, D. D., the news of his miraculous cure and rescue from death will be heralded broad-cast over the country by means of an "unsolicited testimonial." By reason of his prominence as Rev. —— D. D., the more harm will be done; but lo! in a short time he finds that the more he snuffs the more he wants to snuff, and the more nervous he gets, and just here he finds that "Nature's sweet restorer" has taken wings. Then he goes to his physician, who may at the first consultation discover the cause of the trouble, but oftener he does not.

Now the patient has fallen a victim to one of the most, if not the most, seductive and dangerous of drugs, which has been called the greatest recent triumph of the Devil. If he were the only victim in that community it would not be so alarming but through his personal influence and the "unsolicited" testimonial the amount of harm done is simply appalling to contemplate.

This is what is being done daily in almost every community and by the most insidious means, and is wreaking sad havoc. In a majority of cases the patients are made victims innocently and unwittingly, and it is time for us as guardians of the public health to speak out with no uncertain sound, and invoke the aid of our legislators in exposing and crushing out this monster evil of the age the unrestricted manufacture and sale of patent medicines.

To more forcibly impress upon you the extent of this evil, I refer you to a paper read by Dr. George Wilkinson, of Omaha, Neb.—at the meeting of the American Medical Association, 1893. In this article Dr. Wilkinson gives a sketch from a study by personal contact with a colony of cocaine habitues in Omaha, caused from using one preparation advertised as a snuff and cure for catarrh, with the result of an assay of —as he calls it—"products of his Satanic Majesty." He states that the amount of cocaine used daily was often so much as forty to sixty grains.

This, gentlemen, seems to me to be a matter demanding most thoughtful and serious consideration.

TRANSLATIONS.

THE CHOREA OF PREGNANCY.

The chorea of pregnancy, according to Dufournier (*Le Bull. Mèd.* November 21, 1894) does not differ symptomatically from infantile chorea. The chorea of pregnancy occupies in the pathology of pregnancy a special place, in that it is not an accidental accompaniment of the pregnancy, but is provoked by the pregnancy itself. From an etiologic point of view, all of the causes which are noted as predisposing to infantile chorea, in large part are present in the chorea of pregnancy. The nervous system in these patients offers a special impressionability which may be hereditary or acquired after diverse affections. Chorea is transmissible by heredity. Lannois, Déjerine, Huet and Charcot are all in accord upon the importance of the role of heredity in the development of chorea. Another element of etiologic importance is the history of infantile chorea. When a young woman has been afflicted in childhood with a mild or severe chorea it is not rare for this to return in the first pregnancy. It appears most frequently in the first pregnancy, so that primiparity may be stated as a cause of the disease. But the rôle of primiparity must not be exaggerated, because primiparæ constitute the greatest number of pregnant women. Also chorea is most common among young women and these are most frequently primiparæ.

When a woman in her first pregnancy has presented the symptoms of chorea, it is frequent for her in successive pregnancies to show anew the disease, and in each recurrence in a more grave form. The opposite may also be seen, and a young woman who in her first pregnancy had been afflicted with chorea may not show any signs of it in subsequent pregnancies. It is a more complex matter to determine the part which rheumatism, chloro-anemia, hysteria, previous acute diseases, and in a general manner the various infections and auto-intoxications may have in the development of chorea. For a long time Sydenham's chorea was regarded as a rheumatic manifestation. It seems difficult to admit this interpretation in the case of the chorea of pregnancy, because in most of the cases the authors relate an absence of rheumatism in the antecedents of their patients. The analogy which exists between the modifications of puberty and the modifications of pregnancy from the point of view of the nervous system, may permit the adoption for the chorea of pregnancy the conception of Joffroy in regard to Sydenham's chorea, which he considers as a disease of evolution affecting the cerebro-spinal axis. W. A. N. D.

Influence of Odors upon the Voice.

It is well known to singers that perfumes influence the voice. The violet is regarded by artists as the flower which especially causes hoarseness. The rose on the contrary, is regarded as inoffensive. The subject is studied by M. Joal in a brochure recently published. He does not believe that the emanations of the violet prevent free vibration of the vocal cords, and thinks that if this flower has any injurious effect upon the voice the rose and other flowers must have the same action. There is, in fact, nothing fixed or regular in the influence exerted by the perfume of flowers. It is a matter of individual susceptibility. Some are affected by the lilac; others by the mimosa. Others, again, are in no manner affected by flowers, musk, amber, civet, or the various toilet preparations, but experience obstruction of the nose, hoarseness and oppression from the odors of oils, grasses, burnt horn, and the emanations from tanneries and breweries.

"It is very difficult," adds M. Joal, "to furnish an explanation of these peculiarities, and we must content ourselves by regarding them as examples of olfactive idiosyncrasy. It cannot be denied that odors may occasion various accidents and vocal troubles, especially in persons of nervous temperament and excessive sensibility. Six out of seven of his patients were decidedly neuropathic.— *La Médicine Modern.*

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SATURDAY, JUNE 29, 1895.

EDITORIAL.

DYING DECLARATIONS.

The following act is pending in the State Senate, having passed the House of Representatives of Pennsylvania:

AN ACT

Making dying declarations competent in prosecutions for criminal abortions and attempted abortions where the subject shall die in consequence of such unlawful acts.

Section 1. "*Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by the authority of the same:*

"Section 1. That the ante-mortem statements of any woman who shall hereafter die in consequence of any criminal acts producing or intended to produce a miscarriage of such woman, as to the causes of her injuries shall be competent evidence on the trial of any person charged with the commission of such injuries with like effect and under like limitations as applying to dying declarations in prosecutions for felonious homicide.

"Provided, however, That before such statement shall be submitted to the jury as evidence, the Commonwealth shall by competent and satisfactory evidence prove that such woman was of sound mind at the time such ante-mortem statements were made. And provided, further, That no conviction shall be had upon the uncorroborated declaration of such woman.

"Section 2. All acts or parts of acts inconsistent herewith be and the same are hereby repealed."

If this was an act that created a few political offices thus increasing the leverage of the political power of our statesmen, it would receive their immediate attention. All good people, all with a high sense of what the justice and morals of a community should be, and would have the same copied into our law, will see the wisdom and justice of this act.

Yet all the virtue of this act should not

be destroyed by the one closing proviso—"That no conviction shall be had upon the uncorroborated declaration of such woman."

It should be remembered that it is only in very rare or exceptional cases that any but the wronged woman can testify as to the crime committed against her. The crimes to which she is most exposed are those of the darkness. She should be permitted to speak and speak freely under the rules of law which have centuries of endorsement.

ABSTRACTS.

TECHNIQUE OF MAKING URETHRAL INJECTIONS.

Guiard (*Annales des Maladies des Organes Genito-Urinaires*,), gives the results of his investigations concerning the urethra and its medication. The capacity of the uretera had been stated by Jarin and Leprevoct to be from five to eight grams, therefore it was held that a urethral syringe should not hold more than five or six grams, equal to about one and one-half drachms. Later it was shown that posterior urethritis, particularly late in the disease, was far more frequent than formerly supposed. The author by expermenting on the living subject found that the urethra would always hold eight to ten grams (two to two and one half fluid drachms), and more often twelve to fifteen grams, and sometimes sixteen to seventeen. As the patient could tell when the sphincter was forced, this was avoided. These deep injections are only called for when definite symptoms have already demonstrated that the posterior region of the urethra is already affected.

In order to administer these deep injections, the author uses a syringe of twenty grams (five drachms) capacity. When it is desired to overcome the sphincter, gentle pressure is made when the liquid will enter. In an experience of ten years he has never had any accidents, and only encountered one case in which the sphincter would not relax. It is better to give the injections when the patient is lying down than when he is standing up. The requirments of an effective injection is that it shall reach the diseased parts. To do this a syringe of twenty grams (five fluid drachms) capacity should be used, and the injection of its entire contents, if carefully done, is easy and causes no inconvenience. —*Univer. Med. Mag.*

THE CAUSE AND PREVENTION OF NEURALGIA IN AMPUTATION STUMPS.

Witzel (Centralbl. f. Chir.), holds that neuralgia after amputation is not caused, as is generally supposed, by the formation of neuromata at the ends of the divided nerves. He states that if such were the case it would be necessary to lay aside the amputating knife. The neuralgic pains, he believes, are due to adhesion of the neuromatous swelling to the end of a bone. In order that its functions may be properly performed a nerve should move freely in its sheath. The structural elements which serve the special functions of a nerve are during life extremely delicate and almost fluid. The ordinary movements, therefore, of an adjacent joint would interfere with the structure and functions of the nerves of a limb if these nerves had no longer free range of movement in the direction of their long axes. In two cases of neuralgia after amputation in which Witzel had opportunities of dissecting the

stumps he found thick neuromatous swellings at the ends of the divided nerves. which were bound down by tough cicatricial tissue to the ends of the bones. It is evident that during movements of the stump at the nearest joint the fixed nerves must be stretched, those on the flexion side during extension and those on the extention side during flexion. In neuralgia caused by confinement of a nerve in a mass of callus the pain, it is held, is due to the prevention of the nerve's movement and not to its compression. As a preventive treatment Witzel recommends that in every amputation as much attention should be paid to the nerves as to the large arteries, and that the former should be pulled away from the flaps and divided high up. Attention should be particularly directed to this precaution in cases of amputation at the ankle and shoulder.—Brit. Med. Jour.

THE CLINICAL USES OF APOMORPHINE.

In an extended article, J. Boyer and L. Guinard (*Bull. Génér. de Thérapeutique*) write of the physiological action and clinical uses of apomorphine. The authors state that the drug produces two kinds of physiological phenomena, one being characterized by *excitation*, in which spasms, trismus, convulsions, agitation, vertigo, and hyperæsthesia are observed; the other, by *depression*, in which there occur syncope, collapse, hypothermia, general weakness, muscular paralysis, weakness and arrest of respiration, cardiac enfeeblement, and anæsthesia. These various phenomena are the result of the actions of two different kinds of drugs. The writers believe that the crystalline form of apomorphine causes exciting and convulsive phenomena, while the amorphous salts of the drug produce chiefly symptoms of stupor and paralysis. To obviate the production of diverse phenomena, and in order to obtain in the adult a simple and pure emetic effect, the white *crystalline hydrochlorate of apomorphine* should be employed in doses of 3 to 5 milligrammes ($\frac{1}{20}$ to $\frac{1}{12}$ grain). The authors believe that, judging from the results of the principal researches so far published, and which they review in a careful and thorough manner, apomorphine is a medicament of real value. Its efficacy and the superiority of its action over other emetics have been established. The easy method of its administration by subcutaneous injections and the rapidity of its action make it an excellent therapeutic agent. If employed in a pure form, apomorphine will not cause serious after-effects.—*Therapeutic Gazette.*

HOT SALINE BATHS IN INFANTILE PARALYSIS.

In the chronic stage of infantile paralysis, the mother should be instructed to bathe the affected parts daily with a hot solution of common salt. The solution should be of the strength of three or four ounces of salt to a quart of water and the application should be as hot as can be borne and should be followed by vigorous rubbing of the affected parts with oil. The mother should also be instructed to flex all the joints completely, taking care to antagonize any tendency to equinus, or equino-valgus, or-varus, which may occur. The writer recently operated upon a case in which the most extreme degree of equinus possible, had resulted from neglect of this precaution. Both feet were affected. In one foot the equinus was complicated with varus, and in the other with valgus. These cases are often neglected, to the great detriment of the patient. Applications of electricity, systematic massage, and skillfully directed gymnastics are of great value in these cases, and should be employed as soon as lesion is discovered, or at least as soon as the acute symptoms have disappeared. In some cases orthopædic apparatus is necessary to prevent serious deformity. Great results can often be accomplished in these cases; even the most unpromising symptoms may sometimes be made to yield surprising results by persevering treatment.—*Ed. Mod. Med.*

THE LIBRARY TABLE.

TWENTIETH CENTURY PRACTICE.—An International Encyclopedia of Modern Medical Science, by leading authorities of Europe and America. Edited by Thos. L. Stedman, M.D., New York City. In twenty volumes. Volume I, "Diseases of the Uroporetic System;" Volume II, "Nutritive Disorders." New York: Wm. Wood & Company. 1895.

Wm. Wood & Co., the well-known medical publishers of New York, have conceived and are carrying into execution one of the most daring ventures known in the history of medical publications. A colossal work of twenty large octavo volumes, presenting in some fifteen thousand pages all that is pertinent to the practice of modern medicine, as set forth by upwards of one hundred of the leaders in medical thought, men, who, without exception, are of international reputation.

During the past two decades numerous strides have been made toward placing the art of medicine upon a scientific basis, and it is the purpose of the present publication to place before the medical world, the results of the profound study which has done so much to revolutionize our notions as to the prevention and cure of disease. It is probably safe to say that never before was such an aggregation of medical masters secured as in the production of this enterprise.

The initial volume treats of "The Uroporetic System" and includes elaborate discussions of the diseases of the kidneys, ureters, bladder, prostrate, male and female urethra and urine.

The contributors are Francis Delafield, Howard A. Kelly and G. Frank Lydston of America, and Reginald Harrison and E. Harry Fenwick of London.

The work opens with a masterly monograph on "Diseases of the Kidneys," by Francis Delafield of New York, and the section by Reginald Harrison of London, upon "Diseases of the Ureters and Surgical Affections of the Kidneys," reflects great credit upon the writer.

Special attention is directed to the chapter by Howard A. Kelly of Baltimore, on "Diseases of the Female Bladder and Ureters," which is full of originality and marks a great advance in a heretofore much neglected branch of gynecology.——

The second volume of this work comes to us as a monument of much instructive, as well as interesting reading, and its builders are Dujardin-Beaumetz, Sir Dyce Duckworth, Archibald Garrod, Henry M. Lyman, Thos. J. Maclagan, Carl von Noorden and Max J. Oertel—an array of talented writers, quite sufficient to insure the worthiness of the book.

The work opens with an interesting essay on "Addison's Disease and Other Diseases of the Adrenal Bodies," by Sir Dyce Duckworth, of London. He admits that little new light has been thrown upon the nature of these diseases, or on the functions of the supra-renal capsules since Dr. Thos. Addison of Guy's Hospital first called attention to the subject in 1855.

"Diabetes Mellitics" is disposed of in a fluent manner by Prof. von Noorden of Frankfort, and he offers some suggestive proof as to the possibility of certain exceptional cases of this affection being contagious; an idea, however, which is strongly controverted by other eminent observers. It is interesting to note that although this article comes from the pen of a German physiologist, some sixty pages are devoted to the consideration of treatment.

Prof. Max J. Oertel completes the volume by a treatise on "Obesity." This monograph bears with it special weight, since the writer may be regarded as the inventor of, perhaps, the most successful method of treating this inconvenient ailment.

In conclusion it may be said that this second volume, as a whole, quite maintains the high standard accorded its predecessor.

W. H. P.

TRANSACTIONS OF THE ANTISEPTIC CLUB. Reported by Albert Abrams. Illustrated. New York: E. B. Treat. 1895. Price, $1.75.

Intervals come in every practitioner's life when a little light reading affords a relaxation to the mental strain incident to every busy life. The present volume contains its share of humor and manifests a considerable originality of wit on the part of its author.

SUGGESTIVE THERAPEUTICS IN PSYCHOPATHIA SEXUALIS; with Especial Reference to Contrary Sexual Instinct. By Dr. A. Von Schrenck-Notzing (Munich, Germany). Authorized translation from the German by Charles Gilbert Chaddock, M.D., Professor of Diseases of the Nervous System, Marion-Sims College of Medicine, St. Louis; member of the American Medico-Psychological Association; Attending Neurologist to the Rebekah Hospital, St. Louis, Mo., etc., etc. One volume, royal octavo, 325 pages. Extra cloth, $3.50 net; sheep, $3.50 net. Sold only by subscription to the medical profession exclusively. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry street.

Aside from the interesting reading which this book affords, a new field of treatment is opened up, applicable to a class of cases which often prove most intractable to cure. The author recounts in detail some seventy cases of sexual perversions treated by hypnotic suggestion, some ineffectually, but the majority either cured or manifestly improved.

This work, while of benefit to the intelligent physician, would be a great source of harm were it to reach the hands of the laity—a calamity which the author seeks to avoid by preserving a strictly technical style.

A MANUAL OF THE MODERN THEORY AND TECHNIQUE OF SURGICAL ASEASIS. By Carl Beck, M. D., Visiting Surgeon to St. Marks' Hospital and the German Polliklinik of New York City, etc., with 65 illustrations in the text and twelve full page plates. Philadelphia: W. B. Saunder's, 925 Walnut St. 1895. Price, $1.25.

Owing to our increasing knowledge of the subject of bacteriology, and the consequent advancement in surgical technique, it is quite impossible for the larger text books on surgery to keep abreast of the times. In the manual before us we have a thoroughly up to date presentation of the subject of surgical asepsis and the practical methods of securing it. In addition to the interesting chapter on the influence of microbes, the author details the method of sterilizing instruments and dressings; of treating aseptic and infected wounds; of preparing an operating room in a private house as well as in a hospital (etc).

A chapter on Anæsthesia is a feature. This is a valuable addition to the book and should receive the careful notice of every physician. In embarrassed reputation the author describes the method usually adopted, namely to force the jaws apart with an instrument and draw out the tongue with forceps, and push the angle of the jaw forward. The critic believes this to be a needless waste of time and energy. If the head be lowered and the point of the chin be firmly drawn back so as to put the muscles, joining the chin, the hyoid bone and the sternum on the stretch, the tongue which is attached to the hyoid bone must necessarily be raised up and the glottis opened—and if the nose is not obstructed air will rush in.

The book is well illustrated, the print excellent and altogether it does credit to the well known publisher. W. E. P.

SURGICAL PATHOLOGY AND THERAPEUTICS, by John Collins Warren, M.D., Professor of Surgery in Harvard University; Surgeon to the Massachusetts General Hospital. For sale by subscription only. Cloth, $6.00; one-half morroco, $7.00. W. B. Saunders, publisher.

This work covers the subject well, handling it in an entertaining style, and leaving the reader with a clearer idea of the pathological conditions in a given surgical case than he could get from a book in which operative technique was given on the same page with the description of the disorder. The book is intended particularly for those who have more or less practical acquaintance with surgery, and who are anxious to study it further in a more purely scientific way.

Beginning with a description of bacteria as the cause of various disorders, lencomaines and ptomaines are defined, and a general outline given of the methods for their study now followed in laboratories, but for minute details the reader is referred to books on bacteriology.

Inflammation of various kinds is now taken up and the supposed causes given; then surgical diseases, tuberculosis, actinomycosis, gangrene and others, and their clinical appearances described.

The differences in appearance, structure, and progress, between different varieties or benign and malignant growths, and the different treatments to be adopted follow, and finally a chapter on aseptic and antiseptic surgery.

Very many fine illustrations, the majority of which are collected, present a vivid description of the subjects written about.

S. M. W.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Chest Pains.

These may be due to:

1. Intercostal neuralgia; tenderness at points only.

For neuralgia strap the chest and give arsenic, with an occasional mercurial purge. Quinine acts best after mercury.

1. Rheumatism of the fascia, the whole region being tender.

Chest rheumatism is connected with beer-drinking. The salicylates are useless; alkalies of doubtful utility. The best remedy is water drunk in enormous quantities.

3. Neuritis; circumscribed linear tenderness.
4. Acute pleurisy; chill, fever, friction sound.
5. Dry pleurisy: very common, relieved so surely by adhesive straps that this relief confirms the diagnosis.
6. Neuroma.
7. Aneurism; may not cause pain, even if large.
7. Cancer.
9. Ataxia.
10. Spinal disease.
11. Bronchitic pain; calls for strapping and opium.
12. Myalgia; relieved by straps.
13. Mitral disease; rarely painful.
14. Aortic disease; generally painful.

Premature Births.

M. Villemin (*Universal Medical Journal*) reported before the Societe Obstetricale et Gynecologique the case of a two-year-old child, born in the sixth month of pregnancy. That the child had not had six months of intrauterine life he could vouch, the statement being borne out by the last menstrual period of the mother, the date of the first fetal movements, the child's weight, which was thirty and a half ounces, and its appearance.

Budin had had this infant under observation from the beginning and corroborated Villemin's statements He had examined infants of six or seven months that had cried and lived a few days and had found the alveolar cavities filled with epithelial cells, the lung sinking when placed in a vessel of water.

Charpentier reported a case of premature birth in his practice, the child being not more than 6½ months and weighing thirty-three and one-third ounces. So sure was he that it would not live that he placed it in a basin while he was attending to the mother. After the mother was attended to, the child being still alive, he wrapped it in cotton, and was surprised next day to find it alive. It was then placed in a small well-heated room and fed with a spoon on human milk; on the twelfth day it could take the breast, and since it has thrived and grown.

Gastro-Intestinal Disorders and Female Affections.

Theilhaber cites forty-five cases (*Boston Med. and Surg. Journ.*) of women suffering from stomach disorders, twenty-five with nervous dyspepsia, twelve with stomach atony, two with stomach catarrh, two with chronic intestinal catarrh, and four with other affections. Gynæcological examination revealed absence of any abnormalicy in four cases; in nineteen catarrhal endometritis, with more or less thickening of the parenchyma of the uterus, three of oophoritis, two of parametritis, one of old puerperal parametritis, one of retroversion of the antefluxed uterus, and one of small ovarian tumor. As to the connection between the gynæcological troubles and the stomach and bowel affections, Theilhaber divides the cases into three groups. The first embraces those cases in which the gynæcological condition is only a chance occurrence. In the second group belong those cases in which the gynæcological disturbances are caused by the gastro-intestinal affection. Theilhaber mentions here especially cases in which metrorrhagia and dysmenorrhœa are caused by constipation. In the third group the uterine condition is the cause of the stomach trouble. Six of the patients with nervous dyspepsia suffered from retroflexion; in four of these the dyspepsia was cured by the reposition of the uterus, in two not. Nervous dyspepsia and hœmorrhagic endometritis existed in three cases. In two the digestive difficulties which had existed for years disappeared after curetting; one patient withdrew herself from treatment. Of eleven cases of nervous dyspepsia and catarrhal endometritis local uterine treatment had prompt effect in eight. Four cases of stomach atony which were associated with various local conditions were cured coincidently with the cure of the uterine conditions. Theilhaber concludes from his observation that in all cases of nervous dyspepsia, atony of the bowels, or of the stomach, hyperacidity, want of acidity for a long time where rational medicinal treatment has not been successful, thorough gynæcological examination should be made especially when the patients complain of menstrual irregularities or of leucorrhœa. Still though gynæcological treatment is important, it is necessary that stomach treatment should also be carried out.

Intramural Abscess Cavity Filled With Gas and Purulent Material.

(*American Journal of Obstetrics and Diseases of Women and Children.*) By A. F. Jonas, M.D.

Labor in which the right arm presented, necessitating version, was followed a month later by enormous enlargement of the abdomen, the circumference measuring forty-eight inches. On examination, a large mass was found, attempts to move which caused simultaneous movements of the cervix and the supposed fundus. A cystoma with infectious contents was diagnosed and an operation performed. A trocar was introduced into the tumor, and on withdrawal a large quantity of fetid gas rushed out, which reduced the tumor nearly one-half, and was followed by very thick purulent material which contained broken shreds and sloughing tissue. The fundus uteri, ovaries, and tubes were found forced low down in the pelvis and free posteriorly, but anteriorly the uterus was attached by its entire surface to the wall of the cystoma, which was located between the bladder and the uterus. There was no connection with the uterine cavity.

The origin of the abscess was in the anterior uterine wall, and it gradually separated the muscular layers as the quantity of pus increased. Suppurative processes in muscular structures usually produce liquefaction unless a capsule such as would surround a neoplasm is present. A small fibroid was found in the posterior wall, and, since fibromata are frequently multiple, it is not improbable that one existed encapsulated in the anterior wall. An existing intramural fibroid subjected to long continued pressure, such as would occur in pregnancy, becomes more or less bruised, and is in excellent condition for microbic infection, development of suppuration, and distention of the cavity with gas, the product of microbic action. So large a quantity as was found in this case is extremely rare.

Nuclein in Therapy.

Dr. F. W. Garber cites thirteen cases benefitted by the use of Vaughan's nuclein. Of these (*Therap. Gaz.*) ten were of tuberculosis, one of neurasthenia, one of follicular tonsilitis, and one of troublesome sinus with phlegmonous cellulitis induced by a sloughing tendon leading from the second finger high into the palm of the hand. Dr. Garber concludes nuclein is of value in incipient tuberculosis. Whether positively curative he is not yet in position to say, but by its early use it is possible to give patients longer lease of life and very much more comfort. If the patient be in position to take advantage of favorable climatic conditions, he has great faith in the complete restoration to health by the use of nuclein of a large number of persons now dying under other treatment.

Tying the Funis to the Maternal Thigh.

Dr. W. M. Guice of Louisiana reported a case of labor (*Med. Brief*) in which he found the funis tied to the maternal thigh to prevent it escaping into the uterine cavity. Dr. White of Riley, Kansas, reports the case of a II-para. He found the child born and the cord tied to the mother's thigh. He cut it and removed the placenta while a neighbor woman bathed the child. She had tied the cord to the mother's leg to prevent it from going back. This is an odd piece of obstetric folklore found among many races. In both instances the women were Americans.

In the Department for Diseases of the Chest, Dr. Mays prescribes sodium salicylate in pleurisy. The pleural cavity bears a marked structural analogy to the synovial sacs, and is as liable to rheumatic attack as they are; and these cases are greatly benefitted by the agent mentioned. Unless clearly due to other causes, pleuritic affections ought to be tested by an anti-rheumatic drug. Even in cases of serous effusion, or of empyema, either before or after the fluid has been drained off, sodium salicylate is of great value. It is given in five or ten-grain doses, four times a day.—*Polyclinic.*

A French doctor, according to the Cincinnati *Medical Journal*, has devised a vibrating helmet, constructed of strips of steel, and the motive power is a small electric motor. Its inventor uses it in case of nervous headache. The sensation, which is described as not unpleasant, produces drowsiness, the patient falls to sleep under its influence, and awakes to finds that the pain has ceased.

In the Treatment of Pleural Effusion

Segalea (*La Medecine Moderne*) has employed with success topical applications of guaiacol in the following formula:

Guaiacol	m xxxvi.
Glycerin }	ää ℥ss.
Tincture of iodin }	

M.

The applications are made by means of a brush to the entire posterior aspect of the chest, which is then covered with cotton and an impermeable dressing and a bandage.

In a case of anasarca, with anuria, in the sequence of scariatina, in which other measures had failed, applications of the following combinations were soon followed by relief:

Guaiacol	m xvi.
Glycerin	℥ss.

M.

—*Medical News.*

The Contagion of Mumps.

Le Courrier Medical gives some interesting information concerning mumps. The incubation period varies from eighteen to twenty-two days. It is especially contagious during this period, but is also contagious for some time after cure. The exact length of time has not yet been determined. The parotid and testicular fluids and also the blood appear to contain a certain pathogenic organism, but as yet this point is unsettled. Hitherto the results of inoculation with this special microbe have been negative. Frequently the disease begins with tumefaction of the submaxillary glands and a severe angina. Sometimes in metastatic orchitis the swelling begins with an epididymitis.—*Mod. Med.*

Aphasia Occurring During Convalescence from Typhoid Fever.

Dr. S. B. Ward reports a case (*Albany Medical Annals*). W. S., a boy 12 years of age, suffering with typhoid fever. I saw him on the morning of the 4th, and found that great improvement had occurred during the preceding twenty-four hours. He was exceedingly weak, having had a severe attack with a pneumonic complication, during the preceding four or five days; but the lung was clearing up; the temperature was below 101° F.; he was taking nourishment well, and there seemed to be a fair chance of his recovery. He was somewhat deaf, but gave clear evidence of hearing when spoken to in a raised voice. I noticed that he did not answer the question I asked him, but the nurse attributed this to great weakness, and as no importance attached to his answer, no further effort was made to question him. On November 9th his father wrote me that he was better; his strength improving daily, and his hearing much better.

This case is, in my experience, so unusual that it seems worth while to put it on record. Embolism during typhoid, or during the convalescence from typhoid, are by no means rare and the left anterior cerebral artery is probably as likely to be affected in this disease as in any other; but in the large majority of cases of aphasia due to embolism paralysis is present in some degree in some locality, while in this case it was entirely absent. Besides the trouble passed away so rapidly as to preclude the probability of its being due to embolism.

...pically, as a Prophylactic against Diphtheria.

...olis-Cohn reports favorable re... in applying guaiacol to the thro... / healthy children who have been exposed to diphtheria. He uses Merck's preparation, and applies it either full strength or a fifty per cent. solution with glycerine or olive oil. It should be well rubbed into the tonsils and pharynx once daily. In case the throat is already affected, it should be applied twice a day.—*Philadelphia Polyclinic.*

The Treatment of Obesity.

Extensive trials have been made in France with thyroid extract in the treatment of obesity, and cases are recorded in which it would seem that very marked results followed the employment of this remedy, either by subcutaneous injection or by the mouth. The dose usually given amounted to about 15 1-2 minims of the thyroid juice daily, and in three months, in one instance, the patient's weight fell nearly 40 pounds. As soon as the treatment was discontinued the loss of flesh also ceased, and when the thyroid extract was resumed a daily loss of between three and four ounces again occurred. In other cases, however, the treatment was followed by no marked results, and the conclusion therefore, is obvious—either that the cause of the obesity must have been different, or that the thyroid extract may have been impure. On the other hand, it has been conclusively proved, in this country, that the use of the remedy may be followed by somewhat dangerous nerve symptoms, and that, in fact, the thyroid extract, powerful as it has proved to be in the treatment of various diseases hitherto considered to be difficult of cure, may be attended by results of an alarming character; and there is, therefore, reason to feel that firms which prepare this remedy would be well advised to dispense it only under medical direction.—*Med. Times and Register.*

SURGERY.

Cases Simulating Meningitis Without Corresponding Anatomical Lesions ("Pseudomoningitis").

Krannhals (*Deutsches Archiv fur klinische Medicin*) reports seven cases in which the symptoms were almost exclusively nervous, and in which the diagnosis of meningitis was made, although some of the more characteristic symptoms were wanting. One case ended in recovery; the termination of another could not be determined; five died. The findings at the post-mortem examination did not confirm the diagnosis, there being no exudate, no inflammatory turbidity, nothing but hyperemia and edema of the pia, and a varying number of hemorrhages in the same membrane. The microscopical examination of two cases confirmed the pre-eminent hemorrhagic character of the affection, and the absence of any real inflammatory changes, if one does not regard as such the edema of the pia, which in reality had the character of an edema due to congestion rather than inflammation. The brain itself showed no inflammatory changes; on the contrary, here and there, in the superficial layers of the cortex, there was a retrograde metamorphosis, a beginning necrosis due to a disturbance of the circulation brought about by the numerous hemorrhages in the pia. Bacteriological examination of the meningeal serum of three cases proved negative. Krannhals seeks to explain an intimate relationship between influenza and these cases of "pseudomeningitis," occurring as they did during the spring of 1890, following the influenza epidemic. He believes that the symptoms of the cases of "pseudomeningitis," due to some infectious process, and of acute meningitis in general, depend especially upon the action upon the central nervous system of certain toxines, and secondarily upon the anatomical lesions present.

NEWS AND MISCELLANY.

Reduced Rates to Baltimore.

The B & O. R. R. Co. will sell excursion tickets to Baltimore from all points on its lines east of Ohio River at one fare for the round trip. Tickets will be sold July 16th and 17th, valid for return passage until August 5th. For time of trains and full details, call or write nearest B. & O. Agent.

The rate from Philadelphia will be $2.80 and correspondingly low rates from other points.—3t.

Summer Vacation Tours.

The Baltimore and Ohio R. R. Co. now has on sale at all its offices east of the Ohio River a full line of tourist excursion tickets to all the lake, mountain and seashore resorts in the Eastern and Northern States and in Canada. These tickets are valid for return journey until October 31. Before deciding upon your summer outing it would be well to consult the B. & O. Book of "Routes and Rates for Summer Tours." All B. & O. Ticket Agents at principal points have them, and they will be sent post paid upon receipt of ten cents by Chas. O. Scull, Gen'l Passenger Agent, B. & O. R. R., Baltimore, Md.—2t.

Low Rates to Denver.

The B. & O. R. R. Co. will place on sale at all ticket offices on its lines east of the Ohio River round-trip tickets to Denver, Colorado Springs, Manitou and Pueblo, for all trains of July 2, 3, 4, 5, and valid from starting point on day of sale and good returning from Colorado points July 12 to 15 inclusive. The rate from Philadelphia will be $44.75, and correspondingly low rates when from other stations. Tickets will be good via St. Louis or Chicago.—3t.

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